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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

January 5, 1920.

The Bulletin Takes a Vacation

This week's Bulletin is the first issued since December 15, 1919. The holiday season made it impracticable to issue the Bulletin on December 22 and 29,1919.

Illness Forces Smith Riley to take Extended Leave

Ill health has forced Smith Riley, District Forester at Denver, Colorado, since the creation of the district December 1, 1908, to give up his position and take extended leave. Early last summer Mr. Riley found it necessary to withdraw from active duty. At present he is receiving treatment at the Walter Reed Hospital, Washington, D.C.

Mr. Riley's withdrawal from active duty in District Two will make a big hole there. He has to his credit the development of an effective organization that put across the work of the Forest Service in a region where public sentiment was particularly hostile in the early days.

Smith Riley entered the Forest Service as student assistant in May, 1899. His entire service from that time through his successive assignments and including the appointment as District Forester, was that of the pioneer.

After attending the district schools of Maryland and the High School at Washington, D. C., Mr. Riley attended the Biltmore Forest School, where he took a special course in silviculture and forest planting. His first practical experience in forestry was gained as an assistant in making a working plan for a timber tract in Maryland. During the next three years he assisted in field work for the making of working plans in the northeast, in the South, and in the West.

In Land Office days we find Head Ranger Riley at work in the Black Hills of South Dakota and the Bighorn Mountains of Wyoming. The difficulties that confronted the pioneer forester is indicated by a story which appeared recently in an eastern magazine which gave an account of the work of an early supervisor of the Black Hills. The appointee was a local citizen, who won out against an Indiana politician who had been tentatively selected for the job. He is reported to have had this to say, "As soon as I was appointed, Washington commenced to send a lot of dudes out here as Forest Rangers. I didn't want them. I wanted Forest Rangers who could sleep out in the open with or without a blanket, put out a fire, and catch a horse thief, and I wrote the Colonel about it."

One of the dudes was Smith Riley. The story of his work for the Government will stand by itself.

Smith Riley later did boundary work in Utah and Idaho. Many interests in Idaho were making life very interesting for the men who were engaged in determining boundaries of proposed reserves, as they were known at that time. That was the period in the life of men engaged in boundary work, when it was necessary to sneak into town after dark and register under an assumed name. This region was particularly a hotbed of opponents to the extension of forest reserves, because it meant the termination of unrestrained abuse and wrongful appropriation of wealth rightfully belonging to the people as a whole.

With the formation of the western inspection districts, Smith Riley chief inspector of the Rocky Mountain district with headquarters at Denver. his guidance as inspector the boundaries of the Forests of that district were more finely drawn, much land not best suited for inclusion in these Forests was excluded. By this time the Forest Homestead Act had also become a law and the complicated problem of the classification of lands was also underway.

With the problem of boundaries practically settled, agricultural land available for acquisition determined, the work of the district was turned to the general question of administration. This work has gone along definite and constructive lines. Smith Riley's long and constructive service in District Two has made itself evident time and time again.

Peck Appointed District Forester at Denver

Allen S. Peck has been appointed District Forester of District Two and will assume his new duties on February 1, 1920.

Lieutenant-Colonel Peck first became a member of the Forest Service in the summer of 1902, at which time he was appointed Student Assistant in the Bureau of Forestry. His first assignment was to the party making the forest working plan on Sqaw Mountain Township in Maine. The next summer Peck was engaged in reconnaissance and reforestation studies in Nebraska, Colorado, and California. During the winter 1904-05 he attended the University of Michigan to take the courses in forestry. He was graduated from Union College, New York, in 1903.

In 1905 Peck was appointed Assistant Forest Expert, and assigned to work on the Ft. Bayard forest nursery. While there he prepared a planting plan for the Ft. Bayard Military Reservation.

In 1906 he became Forest Assistant and was engaged in the preparation of cooperative planting plans in the eastern States.

With the organization of the district, he went to Albuquerque as Assistant Chief of Operation and then later became Assistant District Forester in charge of Operation. In 1914 Peck was promoted to Forest Inspector and transferred to Washington and assigned to Operation. As Forest Inspector he rounded out his experience already had in the district in administration and personnel matters. Special attention was given to allotments, special fire studies, and personnel matters.

With the outbreak of hostilities with Germany, he received a commission as Major in the United States Engineers (Reserve). He was assigned to the General Headquarters at Chaumont and soon after promoted to Lieutenant-Colonel. The acquisition of all timber supplies in the War Zone used by the army were obtained through Lieutenant-Colonel Peck. To take care of this work it was of course necessary to build up the organization and obtain the equipment essential to carry on the work. He put it across, and then when the fuel situation at the front became acute, Lieutenant-Colonel Peck was given the additional task of furnishing the quartermaster corps with the needed fuelwood. To accomplish this, a force of 10,000 service troops were assigned. This war work was going along in excellent fashion, and the big requisition for fuel was being filled, when the end came.

Lieutenant-Colonel Peck was one of the last Forest Service men in military service to return to this country, staying in France for the general windup of affairs. Since his return he has been down South with his family, and now gets his discharge from the Army to enter on his new duties.

Pooler Appointed District Forester at Albuquerque

Frank C. W. Pooler has been appointed District Forester of the Southwestern District effective January 1, 1920, succeeding to the position made vacant by the recent transfer of Paul G. Redington to San Francisco.

Mr. Pooler's promotion to District Forester comes in recognition of his years of service of high quality in that district. Since 1910 Mr. Pooler has been Assistant District Forester in charge of Lands, in which position he has very successfully carried to a happy consummation the land classification work. Mr. Pooler has to his credit the completion of the work to the full satisfac- n of the Forest Service and in a manner that the public generally approved.

In taking up the duties as District Forester and assuming the full responsibility of the position, he has to his credit a very thorough knowledge of conditions in the Southwest. Mr. Pooler has worked his way up through the ranks. In 1904 he was appointed ranger on the Prescott, and in 1905 was appointed deputy forest ranger. In 1906 he was appointed supervisor of the Prescott Forest and later transferred to the San Francisco Mountains Forest, or Coconino Forest as it was later known. The Coconino at that time was a real Forest embracing an area of 3,689,982 acres.

In 1910 Mr. Pooler was transferred to the district office and he became Assistant District Forester in Lands. In 1918 he was in charge of affairs as acting district forester for a period of eight months during the absence of District Forester Redington, so that the business of the office is by no means strange to Mr. Pooler.

Kelly Transferred to the Washington Office

Evan W. Kelly, National Forest Examiner in District Five, has been promoted to Inspector in the Washington office and been assigned to the Office of Operation. His headquarters will be at San Francisco. He will be charged with the inspection, correlation, and standardization of fire organization and methods in a service-wide relation, and will also carry on inspection of National Forest organization and personnel, permanent improvements, etc.

During the war Major Kelly saw service in France with the 10th Engineers. At the outbreak of the war he received a commission as Captain and with his company was assigned to the Jura Mountain District, where he did good work, and was later promoted to Major.

Major Kelly has been a member of the Forest Service since May, 1906, and brings to his new job the broad experience gained by working up through the ranks. He was Forest Guard on the Yuba, Ranger on the Tahoe, and Forest Supervisor on the Eldorado. He blazed the way for systematic and effective fire patrol and under his administration the Eldorado Forest reached a perfection of method not duplicated on any other Forest.

In 1916 he was promoted to National Forest Examiner and assigned to the district office at San Francisco and there has been identified with the improvement work and more recently been the guiding spirit in plans for and execution of minor road and trail projects.

Bill for Pulpwood Survey Introduced

Senator Poindexter of Washington introduced a bill in the Senate on December 12, which contemplates the appropriation of one million dollars for the purpose of making a survey of pulpwoods on the public domain and the preparation of a plan for the reforestation of pulpwood lands. The bill reads as follows:

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of Agriculture is hereby authorized and directed to cause a survey to be made of the classes and kinds of timber existing on the public domain, including the National Forests and Indian and other reservations, and on private lands intermingled with or in proximity to the public domain, that are suitable for conversion into wood pulp for the manufacture of newsprint and other forms of paper. The purpose of this survey shall be to determine the location, quantity, quality, and character of the pulpwoods on the public domain and adjacent private lands, and, in so far as possible, to determine their availability and the most practicable means for their use for the manufacture of wood pulp.

That the Secretary of Agriculture shall cause to be prepared and submitted to Congress a report upon the present condition in the United States with respect to the current consumption and production of pulpwoods, together with such a plan as he deems most practicable for assuring a sufficient supply of pulpwood in the future by the reforestation of lands suitable for the production of pulpwood, including such lands in private ownership, or otherwise.

That the sum of $1,000,000 is hereby appropriated, from any money in the Treasury of the United States not otherwise appropriated, for carrying out the purposes of this Act, to be available until expended."

The Christmas Tree of District Two

That hope eternal exists in District Two is indicated by the Christmas tree in the December Bulletin. A heavily laden tree is shown, and as gifts for the Forest force we find the following:

The Christmas Tree of District Two (Cont.)

Money for a new trail.
A water system.
Supervisors' meeting.
Rangers' meeting.
New clerk.
A new barn.
A bath room.
A new stove.
Automobile for every supervisor.
Better maps.
100% increase in salary.
50 cent mileage.
Commutation of quarters.
$2,500 ranger stations.

Endorse Government Employees' Mutual Relief Association

The wives of Forest Officers attending the Coronado Ranger Meeting passed the following resolution. The advice is good equally to bachelors and benedicts:

"In view of the chance of sickness and accident not covered by present compensation laws, we believe it is the duty of every Forest Officer on the Coronado Forest and other Forests in the Southwestern District to become members of the Government Employees' Mutual Relief Association. This is a duty to themselves and their fellow workers in the case of single men and most certainly a duty to their families in the case of married men. We suggest that the Supervisor again send to each Officer a blank and urge a hundred per cent enrollment for this Forest."

Forest Green Uniform for Red Cross

Announcement has been made that forest green will be the official color of the American Red Cross field service uniform. It appears that this color was adopted in October, 1918, but the wearing was not made compulsory at that time because many members had the light gray uniform. Wearing forest green uniforms becomes compulsory after December 31, 1919.

Ranger Morrison Loses Life in Snow Slide

Forest Ranger Harold M. Morrison of the Cache Forest was caught in a snow slide and frozen to death while out examing timber on December 12, 1919. Ranger Morrison had been in the employ of the Forest Service for but a brief period. He was 28 years of age, a graduate of the New York Ranger School, and had had about eight years of practical experience in forestry work in various sections of the country. His home was at Braintree, Massachusetts. He served with the Army during the war, enlisting as a private and had advanced to second lieutenant at the time of his discharge.

Mr. Morrison was appointed Forest Ranger on November 8 and after three weeks' service in the district office, was assigned to the Cache Forest, to take charge of timber sale operations on one of the Idaho divisions of the Forest.

Forest Ranger F. W. Rowen was in telephone communication with Ranger Morrison on the morning of December 12, at which time he stated that he would go to Soda Springs the next day as the mill operations were to be closed down. It seems that he left the camp at 1 p. m. the same day, without having left word of his plans with anyone at the mill. No concern of his failure to return to camp was felt because Ranger Morrison was in the habit of getting back late to the camp. As he did not appear the next morning inquiries were made at several camps to which he might have gone for the night. As he was not to be located, searching parties were started and succeeded in finding the body buried in the snow.

Ranger Morrison Loses Life in Snow Slide (Cont.)

On leaving the mill, Ranger Morrison worked his way along the ridge leading east from the mill and then later tried to work his way back through the bottom of the canyon. When about a quarter of a mile from the head of the canyon he was struck by a snow slide. The snow slide was about 200 yards long and 50 yards up the side of the canyon. The snow was about two feet deep. It had buried Morrison a foot above his head while he was in a sitting position. It is believed that he must have been partially stunned by the slide, for otherwise he should have been able to dig himself out. On the night of the accident the thermometer registered 42° below zero at Soda Springs.

District 2 - Rocky Mountain District

The following resolution was adopted at conference of Northwest Tourist Association Secretaries held in St. Paul, Minnesota, November 20-21, 1919:

"WHEREAS, in the National Forest Reserves of America, the people have recreation grounds of infinite beauty and of the greatest possible value in providing recreation in restoring health of mind and body, ensuing from our strenuous life of today, and in fitting all who visit these reserves for the discharge of their full duties of citizenship which are dependent upon perfect health, and

WHEREAS, these forest reserves are the stepping stones of the people to other resort regions of America, it is hereby

RESOLVED that Congress be asked to provide a very much increased fund for the development of the National Forest Reserves so ably administered in the Department of Agriculture under Secretary D. F. Houston; and that this resolution be presented in person to Secretary Houston for transmission to Congress by the mover during his visit to Washington."

A preliminary tabulation of the recommendations contained in Part I of the Annual Grazing Report from the Forests of this District shows that practically the same number of stock has been recommended for 1920 as was recommended for 1919. The total reduction for the District is but 1215 cattle and horses, and 1710 sheep.

Rather insistent requests and resolutions are being received by the District Forester from the northwestern part of Colorado asking that the Forest Service take steps to prohibit the running of dogs in large packs in that locality. Control must be brought about through the State Laws, but the question is becoming rather serious locally since it has become an annual occurrence and is creating a great deal of disturbance on ranges heavily stocked with cattle.

The Advisory Board of the Colorado Stockgrowers Association recently passed a resolution on the subject in an effort to start action and possibly the pressure will be made strong enough to get consideration by the Colorado State Legislature.

The unusual cold weather which has prevailed throughout Colorado since Armistice Day, with only occasional days of good weather, and which has been attended in a number of localities with heavy snows, has given rise to considerable apprehension on the part of the State Game Department for the elk and deer. State Game Commissioner Roland G. Parvin is endeavoring to keep in close touch with the situation and has requested the Forest officers to go ahead on their own initiative where conditions are acute and secure the necessary feed, sending the bill later to the State Game Department, which has authority to purchase feed for game animals in emergency.

The Forester has approved advertisement of the timber included in the Homestake unit on the Holy Cross - approximately 39 million feet - at the recommended rates of $1.65 per M feet for live Engelmann spruce and Lodgepole pine, and $1 per M feet for alpine fir and merchantable dead timber of all species, and 16¢ per hundred linear feet for prop material of all species. This timber is located approximately 10 miles up Homestake Creek from Red Cliff, the nearest railroad point on the D. & R. G.

District 2 - Rocky Mountain District (Cont.)

Approximately 2 million feet of timber included in the Dove Creek Block to the northwest of Dolores within the Montezuma Forest was recently advertised at $3.50 per M feet for green Yellow pine saw timber, and $2 per M feet for dead Yellow pine saw timber. Two bids have been received - one at the minimum rates advertised and another at $4.25 for green and $2 for dead - the latter bid was accepted.

Forest Examiner Johnson left Denver for a trip to the Bureau of Plant Industry planting stations at Dalhart and Amarillo, Texas, and Woodward, Oklahoma, and Fort Leavenworth, Kansas. He reports the work at the experiment stations to be well worth while and in need of extension by the Government, for there is urgent need for tree planting in the Panhdnale region of Texas. At Fort Leavenworth they have had about 300 prisoners cutting fuel for nearly a month in order to meet the coal shortage. Apparently, a pretty good job has been done in the selection of trees for cutting at this Institution, but if timber cutting is to continue in the future at the same rate it has in the past, additional planting will be necessary.

The central purchasing scheme started in District Two in 1915 and which, at first, covered only automobile tires and accessories, has gradually grown until at the present time it includes all forms of motor accessories, groceries, meat, butter and eggs, paints, hardware, sporting goods, clothing and household furnishings and camping equipment. To date, a total of $11,415 has been spent through this agency by Forest officers in Denver and on the various National Forests of the District, with a net saving to the purchasers of approximately $2,420. The bulk of this business, amounting to $6,678, was transacted during the current year, and the men in the field are now beginning to recognize this central purchasing organization as a permanent institution. Recent inquiries from rangers have covered such items as phonographs, shirts, chicken feed and furniture. It is the plan of the District to encourage this cooperative buying especially in these times of high living costs. A marked increase in the volume of business is expected in 1920.

The business is handled on a strictly cash basis, one of the men in the District office assuming responsibility for filling orders received and attending to the payment of bills.

The Sign Shop opened on December 22 in the mail room of the old Post Office building. It will be in charge of Deputy Supervisor A. L. Richey of the Routt Forest, assisted by Ranger E. H. Peck of the Routt and Ranger Tibo Gallegos of the Cochetopa National Forest. So far, requisitions received run considerably less than the number received last year and it is expected that probably not more than 1,200 signs will be made. The experiment is to be tried of using ready mixed paints and several signs will be made up using a new undercoater called "Tector."

District 3 - Southwestern District

Wanderlust has seized Assistant Engineer Lee C. Daves, of the District Office, and he has accepted an offer to go to Liberia and locate the boundary between that country and the French African colonies. The contract is for two years, the salary and perquisites irresistible, and the job a man's job. Daves is amply qualified for the work, being a specialist of wide experience in every phase of surveying from chain-dragging to geodetic astronomy, and the job sought him all the way from Liberia to Albuquerque.

The amount of road work done in this District during the present calendar year is approximately as follows:

ARIZONA

Seventeen miles of road constructed, which includes four miles of the Clifton-Springerville road built by the County in cooperation with the Federal Government.

Eighty-five miles of location surveys made.

District 3 - Southwestern District (Cont.)

NEW MEXICO

Considerably more work has been done in this State than in Arizona, as is indicated by the following figures:

Sixty-seven miles of road constructed; thirty-one miles of location surveys.

None of the above figures include the miscellaneous work on roads and trails done under the direct supervision of the Forest Service.

If Federal appropriations equivalent to those provided during the present fiscal year continue for another ten years we will be able to complete most of the major roads as well as the trails and minor road projects for forest administration.

As most of our work is in the high altitudes, construction and survey work has practically ceased for the winter and will not be resumed before next spring.

Ranger Norton has been transferred to the Coconino Forest from the Klamath Forest in California. Mr. Norton succeeds Forest Examiner O'Byrne who resigned to accept a more lucrative position in State forestry work with the State of Virginia.

After ten weeks' illness Mr. Marsh is back once more at his desk in Silviculture in the District Office.

Corporal F. E. Brennan, recently discharged from the Army after 13 months' service in France, called at the district office a short time ago. Corporal Brennan was formerly Ranger at the Grand Canyon and he expects to reenter the Forest Service.

Engineers J. C. Mulder and Robert L. Hughes have returned to Albuquerque after a six months' field season. Mr. Mulder worked on the trail system on the Datil, Gila, and Tonto Forests, and completed construction of the Workman Creek trail. This trail opens up the archaeological ruins in Cherry Creek, and on the completion of the Salt River-Pleasant Valley road will probably be much used by tourists.

Mr. Hughes laid out the Kendrick Mountain trail and the Bill Williams trail on the Tusayan, and the Apache Maid trail on the Coconino Forest, and completed the construction of the Lake Mary recreational road, which is three miles in length. He also made a location survey for the Water Canyon road on the Apache. Claim is made that the Lake Mary road was constructed for the cheapest unit cost of any construction work done during the year.

Henry M. Meloney, formerly a Ranger in this District, and now a student at the New York State College of Forestry, is one of ten American College students to receive $1,000 each from the American-Scandinavian Foundation to enable them to go to Sweden to study in exchange with ten Swedish students to come to America.

A. S. Wingo of the Lincoln Forest has the following to say about the forage rations:

"I have been experimenting with the oat ration of 8 pounds and find it insufficient. From the test it appears to require about 1 pound of oats to the hundred-weight of horse to keep them in good condition. The hay ration of 20 pounds appears to be sufficient. My horses weigh about 1,050 pounds and are fed from murralls."

Forest Examiner H. D. Burrall is back in Albuquerque after a four months' field trip on the Coconino, Sitgreaves, and Coronado Forests, busy surveying recreational use areas. On the Coronado he surveyed thirty lots on the Catalinas and Santa Rita areas.

Ranger Pierce, custodian of the Walnut Canyon Public Camp Grounds, which embrace the Cliff Dwellings, reports that 6,345 visitors registered at his station during the summer. June was the banner month, with 1,167 visitors, and October a close second, with 1,103 visitors.

Ranger Smith of the Tusayan Forest reports great activity in cordwood sales on the Verde District. Operators are receiving $9 a cord, 47 cents for 8-ft. posts, and 40 cents for 7-ft. posts f.o.b. Cedar Glade.

District 3 - Southwestern District (Cont.)

Violations of the game laws on the Hallack and Howard sale are going to get very unpopular. Scaler Perry of the Carson Forest made another bull's eye in law enforcement. Early in December he caught Eduardo Garcia in the act of killing a grouse. Perry arrested Garcia, took him to a Justice of the Peace at Vallecitos, who fined the defendant $100 on his plea of guilty.

Annual Fire Record for District 3.

Classes	
A	257
B	108
B	108
C	39

Causes	
Railroads	2
Lightning	191
Incendiary	17
Brush burning	7
Campers	30
Lumbering	93
Unknown	45
Miscellaneous	19

Total 404

Timber destroyed, 1,246 M B. F., value	$2,426.38
Total value of timber, reproduction, forage destroyed on National Forest land	3,382.42
Total cost of fighting all fires	6,173.73

Comparison by Years

	1918	1919
Number of fires	795	404
Per cent Class A	54	64
Acreage	35,246	6,440
Acreage per fire	44	16
Cost	$18,395.69	$6,173.73
Cost per fire	23.14	15.28

District 4 - Intermountain District

Snow five feet deep is reported on the Cache Forest in the vicinity of the mill of the Mt. Sherman Lumber Company. The mill is located at an elevation of 7,000 feet.

C. F. Korstian has been selected as a member of the central group of Research men who will work under the direction of the Forester, although the studies to a considerable extent will be carried on in the Forests of the West. Mr. Baker will succeed Mr. Korstian and be in charge of Research work in this District.

Ernest Winkler has returned to Ogden from a trip on which he attended a series of meetings held in cooperation with the Nevada Livestock Association and the University of Nevada. Meetings were held at Austin, Winnemucca, Elko, and Ely, Nevada.

Forest Ranger Andy Casner of the Boise Forest, where he has been for many years, has been promoted to Deputy Supervisor of the Idaho Forest.

Elmer C. Ross has gone back to the Weiser Forest and been assigned as district ranger of the Indian Valley District. Mr. Ross was in the district office since August, 1918, serving in the capacities of Telephone Engineer and Assistant Engineer in Road Construction.

John D. Jones from the Washington office arrived in Ogden to take up Operation and Lands matters. Mr. Jones has been in District One for some time in connection with the fire prevention and suppression study under way.

So that the grazing business can be gotten under way without delay, advertising letters for all Forests have been released. Allowance letters will be issued later. Accordingly Supervisors can proceed with their advertising and receive applications for grazing permits without waiting for the formal allowance letters.

Commendation of the recreational development work on the Sawtooth has been made in a number of letters received by the District Forester. The following is a sample:

"During the past summer, I visited the Sawtooth Forest Reserve north of Hailey on several fishing and hunting trips and was well impressed with the improvements along the Wood River and Alturas and Red Fish Lakes. I wish to commend the practicability of the improvements that I found as they certainly meet the needs and approval of the tourists. I noted automobiles from twelve different states on one of my trips.

"A number of people, including myself, from here contemplate building summer homes along Wood River and the lakes mentioned.

"I had the pleasure of meeting Mr. C. M. Mangum at Alturas and wish to express my appreciation for the courtesies extended by him. He is a pleasant well met and very courteous man and well liked by campers and tourists.

"With many others of this locality, I would like to see the improvement recreation work enlarged and extended to other forest reserves.

"I presume that you would like to hear praise as well as receiving knocks of the work done by your department this year and I for one am well pleased with the work done by the Forest Service and trust that you will be able to extend the work.

"I have written letters of commendation to members of Congress from our State advising them of the work done and asking their support in enlarging and extending this work."

Later opening of the grazing season was the subject put up for consideration by Messrs. Kneipp and Woods at the recent meeting of the Idaho Cattle and Horse Growers' Association at its meeting at Payette. Presentation was also made of the data obtained by Dr. Sampson relative to the requirements of forage plants, in particular reference to early and frequent grazing, the bad condition of cattle ranges as compared with sheep ranges, the necessity of better control of cattle, etc.

District 5 - California District

If the number of reports forwarded to Washington is any index of what District 5 may expect in the way of road construction for the coming years, we are sure to be busy. The Office of Engineering, through Messrs. Dort and Bowlus, has just forwarded to Washington reports on 210 individual road construction projects.

Word has been received from the Acting Solicitor of the Department of Agriculture to the effect that Robert Potter has deposited with the United States Attorney for the Northern District of California a certified check in the sum of $279, in compromise for all claims. In view of the fact that the amount tendered is but very little less than the actual damages claimed.and the United States Attorney recommends that the amount be accepted in full settlement, the Department of Justice has instructed that the case be closed.

"It is my great desire," writes District Forester Redington, in response to an inquiry from the Sacramento (Cal.) Bee, "working through the definitely established policies of the Forest Service, to bring very clearly home to the people of this country the intimate relation between the National Forests and the welfare of the State and the Nation. A growing interest in the out-of-doors is patent everywhere. More and more people are going to the mountains. They must be permitted to get there more readily and made to feel at home on arrival, without hampering restrictions placed on their travel and behavior. The needs of a rapidly growing population for water, timber, stock forage, and recreation must be met, and the demands are bound to be very heavy. One of our big jobs is to study out most thoroughly the supply of Forest commodities and so allot the supply as to bring the greatest benefit to the greatest number.

"I hope to see a growing appreciation on the part of the thousands who use the Forests, of the value of the multiform resources to them collectively and individually. A genuine nonforgetable appreciation of this by every one would soon greatly reduce the now heavy toll which fires are annually taking. Innumerable interests - individual, community, corporate - are dependent on the National Forests for those things which make life so very much worth the living. These interests should be consulted in the management of the Forest lands, and I greatly hope that the Forest Service, in the many problems confronting it, can count on the hearty cooperation of every interest in reaching conclusions as to how the Forests can serve the people in the best possible way."

Ranger Stephenson of the Cleveland Forest, who was in charge of the Forest Service Exhibit at the Riverside Fair, has the following to say of the show:

"Our 'Forest' was the most popular place at the Fair. I think that practically every person who went into the big tent visited our display.

The 'Forest' covered an area of six hundred square feet. The background was of burlap and had a row of transparencies hung on it. The ceiling was made of fish net, with small pine boughs hanging through. We had about fifty large pine cones along the front and numerous Sequoia cones hung in strings between. About twenty pine and cedar trees were planted around, and the floor covered with a mat of pine needles.

One of the exhibits consisted of a small airship that revolved in a circle. This took the children's eyes and lots of them spent hours watching it, trying to find out how it ran. We had lots of fun turning the switch on and off.

We had one of our tool boxes full of fire fighting-equipment and a Burch tent set up on one side. The pine needles and trees made one of the sailors who was with the Navy exhibit homesick, so he asked if he might sleep in the tent at nights. Afterwards he said it was the first week's good sleep he had had in two years.

The next exhibit was the heliograph and portable telephone, along with an alidade and protractor map.

The main exhibit was Maxfield's five causes of fire. This is, to my notion, the best piece of publicity dope we have. It is a revolving table run by electricity. The table is covered so that only one of the five sections shows at a time. The first cause shown is from brush burning. A little valley and brush covered hills are shown with a typical "nester's" home. It shows where he has burned brush and let it get away. The burn is shown by a red light concealed under the table. To make it more realistic, punk is burned under the table and smoke comes out of the hillside just as from a real fire. The next sector is built up to represent an auto road through the hills, and the fire is caused by throwing away burning tobacco or matches. The next is a railroad scene with a miniature railroad track and train, and shows a fire caused from railroad sparks. The next one shows a miniature camp ground with a neglected camp fire starting a fire. The last one is a fire started by lightning, and Jack has fixed a jump spark in the top of a pine tree, and a streak of lightning is shown. This was a great source of delight to the youngsters, and lots of them went and hunted up their folks and made them come to see it.

Passing on, the next exhibit was a model of a log Ranger Station. This model was made by Maxfield and was an exact reproduction of one on the Angeles Forest. This model sure was the delight of the youngsters, and one had to watch it pretty close as the shovels, axes, hammers and grindstones were very fragile and easily broken.

The next in line was a work of art, consisting of bronze casts showing the proper and improper way of making a camp.

The last exhibit was a table loaded down with Sequoia cones from the "General Sherman Tree" which is one of the largest and oldest trees in the world. These cones were given away, and altogether we gave away about five barley sacks full."

There was considerable local agitation against the cutting of young forest trees for the Christmas trade. Some people claim that the practice threatens the future of the Forests, that it mars the landscape, and that it should be prohibited. Wide publicity was given to the Forest Service position that "the normal yearly Christmas-tree demand for the entire State of California can be met, several times over, from the National Forests; and this without imperiling in any way our present or future timber supply."

It is, of course, largely a matter of judgment in selecting the areas from which the demand may properly be filled, together with the adoption of methods of cutting which will insure such areas against ruthless denudation. There are some areas where, because of repeated fires or other causes, young growth is either lacking or is so scanty that the Forest Service cannot permit cutting for Christmas-tree or other purposes. There are other areas, which are intensively used as outdoor playgrounds, on which the young trees growing in their natural environment are far more valuable to the public than would be the case were they gathered for Christmas-tree decorations.

There are, however, thousands of acres in California, as in other States, which have been protected from fire until young growth is now to be found in great profusion. Much of this young growth is so thick that thousands of the trees will be killed by the competition of their neighbors, and still, if fire is kept out, the future of the Forests will be assured.

It seems far better that these young trees be put to some beneficial use than that they be allowed to go to waste.

Effective January 1, 1920, the established rates for meals at Ranger and lookout stations in the California district are raised to 75 cents. The price for beds in similar locations, 75 cents, and for meals and beds in camp, 50 cents. Thus does the high cost of living hit even Government expense accounts.

The expense involved in handling range cattle by means of cooperation on community allotments has often been used as an argument against such a plan. That this expense need not be prohibitive, in fact that it may be kept well under commercial charges for grazing on private lands, is proven by results obtained on the Inyo.

Costs of handling range cattle under definite plans on four Inyo community ranges is reported as follows:

Allotment	No. Stock	No. Owners	Salt Used	Graz. Seas. on	Cost Range Impvt.	Cost* salt	Range Rider	Cost: per head	Graz. Fees	Total cost per hd.
McMurry Mdw.	426	16	1400	5-mo.	407.76	7.00	525.00	$1.28	70¢	$1.98
Coyote	781	9	2900	4-mo.	9.00	26.10	432.35	.59	56¢	1.15
Buttermilk	356	12	2100	5-mo.	52.45	43.00	687.80	2.06	70¢	2.76
Rock Creek	362	6	2100	4-mo.	101.40	22.23	450.00	1.35	56¢	1.91

*Cost of salt if delivered on range.

Summarized the figures show that, on a monthly basis and including cost of permanent improvements, costs run from 28.7 to 55.2¢ per head as contrasted with the common charge of $1.00 per head per month for grazing privileges on private lands in the same vicinity.

District 6 - North Pacific District

Lodgepole may come to its own in this District. A sale for 200,000 feet was made on the Whitman. The lumber is to be made into box material for the fruit industry, and if it meets the requirements there seems to be a chance to dispose of the large quantities of the lodgepole which is at hand on the Whitman and other Forests in the District. The timber was sold at $.50 per thousand feet.

William Kendall, Forest Ranger on the Wenaha, who was some time ago seriously wounded by hunters while he was inspecting sheep range, is on the road to recovery. The exposure to which Ranger Kendall was subjected after being wounded has somewhat impeded his progress. Because of bad trails, rough roads, snow, and inadequate transportation facilities, it took about three days to bring him to the hospital in Walla Walla after having been wounded.

Range inspection and grazing studies were the topics discussed at a recent conference of grazing examiners held in the District Office. The method of conducting range inspection was standardized at a similar meeting last June and there were but few changes to suggest in the recent meeting. Special consideration was given to the question of determining grazing seasons and to the revegetation and artificial reseeding of the range. Improved methods of handling stock and preliminary studies in regard to rotation grazing of cattle were also considered. It is planned to carry on these studies on such forests where grazing is of importance as soon as sufficient funds are available to construct the necessary enclosures.

Assistant District Forester Kavanagh conducted the conference which was participated in by the following: W. L. Dutton of the Whitman, F. V. Horton of the Deschutes, Frank B. Lenzie of the Wenatchee, and D. C. Ingram and J. L. Peterson of the District Office.

Governor Olcott of Oregon has called on the governors of Montana, Idaho, Washington, California, and western Wyoming, to do all within their power to have the airplane forest fire patrol work made effective in these States during 1920. The extension of the patrol has been recommended by Colonel H. H. Arnold, who is in charge of the work of the Air Service for the Western Division and has his headquarters at San Francisco.

Low water in the Columbia River has interfered with the operations of the Wind River Lumber Co. Approximately 16 million feet of logs have become marooned on a sand bar located at the mouth of Wind River, which has become uncovered on account of the low stage of the water. Ranger Colter, scaler on the company's sale area, states that the company is dredging a channel in an effort to be able to send sufficient logs through to keep the company's mill on the Oregon side in operation. The company had another interference with its operations this season on account of an unusual log jam. Approximately one million feet of timber were locked up in this jam, which occurred on Wind River where the stream flows through a narrow canyon. This jam was also caused by low water in the creeks which ordinarily can be depended upon to supply the storage reservoirs maintained to increase the volume of Wind River.

During the past season the company cut approximately 16 million feet of Douglas fir and 9 million feet of cedar, hemlock, and pine on the Columbia Forest. At present about 8 million feet of Government timber is in the woods, felled and ready for logging.

Douglas fir is being used as a substitute for the western red cedar in the manufacture of shingles by several shingle mills in the northwest. One Portland mill has a dozen machines cutting fir shingles. It is claimed for the fir shingle that, even without treatment, it will last as long as the nails that attach it to the roof. Cedar logs sell in Portland at from $30 to $35 per M, Douglas fir logs sell at from $16 to $24 per M. Fir shingles can be profitably marketed at prices ranging from $1.00 to $1.50 below the prices paid for cedar shingles, although at present they are selling at the same prices as for the cedar shingle on account of the heavy demand. Fir shingles are considerably heavier than those of cedar, but freight rates are lower for fir than for cedar.

District 6 - North Pacific District (Cont.)

Santiam Forest has advertised 60,000 M. feet of Douglas fir at $1.60; and about nine million feet of sugar and western pines at $3.00; noble fir and western red cedar at $1.60; and hemlock and silver fir at 50 cents. The tract is located near Detroit, Oregon. Breitenbush River and two smaller streams cross it, and it is a favorite resort in summer. The sale contract will exempt the timber along the streams from cutting, preserve the forest through which the scenic road sometime to be built along the north bank of the Breitenbush will pass, and otherwise safeguard the scenic beauty of the area.

Maps for use of the forest air patrol are being completed by F. A. Elliott, State Forester of Oregon, at the request of the Air Service. They will show cut-over lands, location of sawmills the smoke of which is easily discernible at great heights, logging railroads, and other such features. The State Forester has sent letters to lumbermen and loggers of Oregon, asking their cooperation in the making of these maps.

The first three miles of the 7-mile road to be built from Carson, Washington, on the Columbia River, north through Wind River Valley (Columbia Forest), to the Government mineral springs, has been completed and work discontinued for the winter. It is intended to have the remaining four miles completed by July 1. This is the region of the Wind River Lumber Company sale, and logging operations are carried on near the springs. However, the recreational value and scenic beauty have been safeguarded by exempting from cutting timber nearest the springs and on land through which flows Wind River and several other favorite fishing streams. This road cost the Forest Service $30,000 and the county in which it is located the same amount. The Lumber Company constructed the bridge across Wind River.

H. N. Tucker, of Alaska, where he is interested in fish canneries, called at the District Forester's office here to explain the need for seaplane service in Alaska and to ascertain the possibility of cooperation from the Forest Service in establishing it. He told of the inadequacy of the wireless in Alaska,- by it he can reach only two points, Wrangell and Craig,- and stated his need of a hydroplane to find what canneries scattered over the numerous islands have surplus fish, pointing out that the mountainous character of the land and the multitude of islands into which it is broken make suitable landing places for airplanes hard to find and that any future air connections should be by seaplanes.

District 7 - Eastern District

Forest Examiner E. Murray Bruner, in charge of the Luquillo National Forest in Porto Rico, is in Washington for a brief stay. The most important purpose of Mr. Bruner's visit is to get in touch with some assistants who will stick to the job after reaching the Forest headquarters in Porto Rico. Attractive outside employment makes the stay of Forest officers of brief duration.

Forest Products Laboratory Notes

The reduction of the cost of water resistant glues by the addition of cheap inert materials or certain chemicals is the object of a new glue study now under way. Samples of vegetable proteins are being collected for a study of their glue-making properties. Long heating weakens animal glues according to indications of experiments that have been made. According to the results of strength tests a thick layer of animal glue in a joint is stronger than a thin layer. It has not yet been determined whether the joints of other kinds of glue vary in strength with the varying thicknesses.

Yellow poplar is being used in the manufacture of 25 propellors and 80 fins. The next project will be the selection of propeller and fin laminations from the Philippine mahogany recently furnished by the War Department.

The Navy has called upon the Laboratory to make tests on airplane spruce to determine the stress at which wood will fail under combined loading.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

January 12, 1920.

The Unique Position of the Profession of Forestry

Colonel Graves submitted the following statement to the Joint Commission on Reclassification of Salaries at its session on December 17, when it considered the scientific, technical, and professional services:

"The profession of forestry in the United States is still very young. Twenty years ago there were no foresters trained in American schools. Today there are approximately 1,500 foresters, graduates of schools of higher standing, besides from 100 to 200 who, because of their long practical experience, have qualified as foresters, and possibly 2,500 forest rangers and guards, many of them graduates of ranger forest schools. The profession has thus grown in 20 years from perhaps a dozen men to some 4,000.

Of these, nearly three-fourths, or about 3,000, are in Government and State services. Of the lower grades nearly all are in Government and State work. This is due to the fact that the actual practice of forestry in this country is almost entirely confined to forests in public ownership. Forestry is therefore at present largely a National and State profession.

Those foresters, who upon graduation from forest schools, enter private employ engage chiefly in the logging, manufacturing, and selling phases of forestry, not in the growing and perpetuation of the timber resources. In other words, they must by the force of circumstances neglect to use that part of their training which is most distinctly of public service. The better opportunities afforded by the lumber industry to such graduates attract them to activities which hasten the exhaustion of our natural resources instead of making them public servants whose function it would be to develop and perpetuate the same.

For several years before the war, whole graduating classes from our larger forest schools found employment outside our National service to such an extent that the civil service register for forest assistant--the entering position for technical foresters--contained no available candidates. Practically every forester who leaves the service of the public represents not merely a loss of accumulated experience and training, but also a social loss, since his new activities cease to be of benefit to the public interest. Probably there is hardly another industry in this country at this time where such a divergence exists as between work on public forests and that on privately owned timber lands. In readjusting the salaries paid foresters in the Government service, this aspect of the situation must be considered. The future of our timber supply as now handled and of the multitude of industries dependent on it presents a grave National problem. If our trained foresters, whose chief function should be to develop methods and bring about a continuous timber production on cut-over lands, are allowed to drift into the employ of private interests, whose chief concern is the cheapest and most effective exploitation of standing timber without regard to forest replacement, they will aggravate instead of remedying this situation.

That this drift is serious may be judged by the fact that within 14 months between June 30, 1918, and August 31, 1919, 460 technical Forest Service men resigned. These were from the lower as well as from the higher technical grades. If resignations should continue at this rate, it is evident that there will not be an adequate number of men, qualified by long periods of service, from which to fill even the more responsible positions.

That the chief reason for leaving the Service is the higher remuneration received outside is shown by an analysis of comparative salaries received by 40 technical men who left within the past two years. The average initial salary received in the outside position ranged from 66 to 69 per cent above the salary received in the Service, grouping men according to the grade of position held.

Responsibilities of Foresters

The Forest Service is charged with the duties of investigating the character and extent of the forest resources of the country and with devising methods for utilizing and perpetuating these resources to meet our economic needs. It is, in addition, entrusted with the actual management and development of a vast public property whose value for timber and forage is close to one billion dollars, to say nothing of its less tangible values for protection of watersheds, recreational use, and other public benefits. The average Forest Supervisor, who receives a salary between $2,000 and $2,500 a year, is responsible for the protection and administration of about one million acres of forest and range lands, worth $5,000,000. A District Forester is charged with supervision and the administration of property worth $150,000,000 and receives a salary of $3,600. The men in charge of the timber sale work of the entire Forest Service, which brings into the Treasury more than $1,500,000 a year, and represents a lumber cut far greater than that of the largest lumber company, or those in charge of grazing on the whole National Forest area, which brings in an annual revenue of more than $2,500,000, receive between $3,500 and $4,000.

Among the duties of the Forest Service is comprehensive research in the development of a vital natural resource which with the industries directly dependent upon it represents a value of at least ten billions of dollars; yet the men actually engaged in this research, whose discoveries have actually resulted in saving millions of dollars to the industry, are paid less than laborers in many of the skilled trades.

Qualifications of Foresters

The training of the forester, which within the last 20 years has been adapting itself to the needs of the country, is partly that of a civil or mechanical engineer and partly that of a biologist. In so far as the forester has to do with the growing of trees as a living crop, he is in the same category as an agronomist, or a specialist in a particular crop. The fundamental sciences which he must master include physics, chemistry, botany, and forestry. The character of the forest crop and the methods of its utilization make it necessary for him to know, besides biological sciences, some engineering. In so far as he is concerned with logging and utilization of forest products, involving laying out of logging roads, use of machinery, analyzing and testing of forest products, he is in the same category as a civil or mechanical engineer. The training and specialization required of a forester place him on the same level as either a biologist or an engineer.

Extra Time for Reclassification Commission

An extension of sixty days within which to finish its labors has been granted by Congress to the Commission on the Reclassification of Salaries. Under the original law the report was due not later than January 12, 1920. The members of the Commission feel confident that the full time granted will not nbe needed, but that it will be able to get its report in final shape within the next few weeks.

Forest Supervisors' Meetings

A meeting of the Forest Supervisors of District 3 will be held at Albuquerque on January 26 to 30, inclusive, and of District 2 at Denver on February 24 to 28, inclusive.

The Branch of Lands Expands

Acquisition of Lands under the Weeks Law passes to the Branch of Lands, where the work will be carried on under the general supervision of Assistant Forester Sherman. W. W. Ashe, Forest Inspector, will continue in immediate charge of the work.

The Branch of Forest Management

The Branch of Forest Management succeeds to the present Branch of Silviculture on January 15, 1920. This change is coincident with a reorganization of the work belonging to the Branch. The scope of the work of the Branch will be broadened with a special view to the promotion of the practice of forestry outside the National Forests. The Extension work on farm woodlands and assistance to private owners will be transferred from Research to the Branch of Forest Management.

The development of the practice of forestry on private as well as public lands calls for more specialized direction in the overhead organization. Accordingly the work of the East will be divided from that of the West, and an eastern and a western division will be formed. Assistant Forester Greeley continues in charge of the Branch. Forest Inspectors E. E. Carter and R. Y. Stuart will be in charge of the eastern and western divisions, respectively.

Eastern Division: This Division will be responsible for the silvicultural and management work on National Forests east of the Great Plains, including the States east of North and South Dakota, Nebraska, Kansas, and New Mexico, for cooperation with other Federal agencies and for State cooperative work in this region, and for the extension and application of forestry on private lands. The cooperative and extension work will be conducted through the existing District organizations to the extent practicable. The functions of District 7 in these activities within the territory under its jurisdiction, will be defined by the officer in charge of the Division. It will also be necessary to conduct a large part of the eastern cooperative and extension work directly from the Office of the Eastern Division, by personnel assigned to that Office.

The Office of State Cooperation will be discontinued. Mr. Peters is assigned as assistant to the officer in charge of the Eastern Division. He will continue to be the Service expert on State legislation and cooperative work, but it is anticipated that his duties will be broadened in character to include participation in the work of the Branch dealing with eastern National Forests. The other personnel in State Cooperation is assigned to the Eastern Division. Mr. Cary will also report to the officer in charge of that Division, who will make such assignments of the personnel in his office as will most effectively discharge the responsibilities of the Division.

Western Division: This Division will be responsible for the silvicultural and management work on National Forests west of the Great Plains, for cooperation with other Federal agencies, and for State cooperative work in this region, including cooperation under the Weeks Law, and for the extension and application of forestry on private lands. These activities will be conducted through the existing District organizations. The Western Division will draw freely upon the personnel in the former office of State Cooperation for help and advice in conducting State cooperative work, but Mr. Peters is relieved from further responsibility for such work in the Western States, which will rest hereafter with the Western Division.

Forest Inspector C. G. Smith is assigned as assistant to the officer in charge of the Western Division.

Meeting of American National Livestock Association

The 23rd Annual Convention of the American National Livestock Association will be held at Spokane, Washington, January 25 to 29, inclusive. Among the subjects for discussion are:--Federal control of public grazing lands; administration of National Forests; possible reduction in number of head of stock permitted on National Forests; trails, driveways, etc.; grazing in National Parks.

Provides for Appalachian Forest Experiment Station

Following is the substance of the bill introduced by Senator Overman to provide for the establishment of a forest experiment station at Asheville, N.C.:

Provides for Appalachian Forest Experiment Station (Cont.)

Be it enacted, etc. * * * * that the sum of $45,000 is hereby appropriated * * * to enable the Forest Service, under the direction of the secretary of Agriculture, to establish and maintain a forest experiment station at Asheville, N. C., for the purpose of conducting in the Appalachian hardwood and adjacent forest regions silvicultural and other forestry experiments and investigations independently or in cooperation with other branches of the Federal government, with states and with individuals, to determine the best methods for the conservative management of timber forests, farm woodlands, and other forest lands and thus to increase the productiveness of these forests and to perpetuate the lumber and other wood-manufacturing and wood-using industries.

United States Logging Engineer for India

The selection of C. S. Martin as Consulting Forest Engineer to the Government of India, announced a few days ago, marks the second appointment of an American forester for service with the Indian Government in this capacity. J. LaFon, at one time lumberman in the Forest Service, was appointed last summer and is already in India.

Mr. Martin, a graduate of the Yale Forest School in the class of 1907, has not been in the employ of the Forest Service but has been in private employ with big operators in the Northwest. Messrs. Martin and LaFon have both had extensive experience in logging operations and are well equipped for the new work.

In calling on the Forest Service for recommendations, the Indian office stated that it desired to obtain the services of two logging engineers with wide practical experience in the use of mechanical methods for the transportation of timber with a view of introducing such methods in the forests of India. In particular, they desired men familiar with the working of the Lidgerwood and Clyde equipment and methods in use on the Pacific Coast. Messrs. LaFon and Martin can fill the bill on this score and were accordingly recommended for consideration.

Washington Notes

Mr. Hawes is back in Washington. While absent he attended the Fifth International Blister Rust Conference at Albany, N. Y. In speaking of this meeting Mr. Hawes brought out the interesting fact that the discussions showed that considerable advance has been made in getting information about the disease. At earlier conferences the information was, for the most part, based on foreign literature, but now real information is being gotten together in this country. Experience in this country also shows that the disease spreads much more rapidly than had been indicated by foreign literature to be the case.

From all accounts the disease is much more wide-spread at present than it was supposed to be. In Minnesota efforts will be for control merely, as it has advanced beyond the stage making eradication possible. So far the blister rust disease has not been found in the Rocky Mountains. Several scouts have been on the lookout for it in that region. The spread towards the South is also very slow. There seems to be but little damag in the white pine belt of the Southern Appalachians because of the scarcity of ribes.

Inspections during the past year indicate that in parts of New England there is a much higher percentage of pine infected than previous reports had indicated.

In the Connecticut Valley some stands have been found where as much as 40 per cent of the trees were infected.

As against the foregoing gloomy prospects, Mr. Hawes stated that very encouraging results had been obtained in eradicating ribes. Much local cooperation of towns and owners has been secured for this work. In Rhode Island, where the amount of ribes is small, the cost of the work averaged 13 cents per acre; in Massachusetts it cost 57 cents. In New Hampshire 163,000 acres were covered at costs ranging from 3 cents to 84 cents per acre.

Eradications seem to be very effective for 642 checks that were made during the following year showed 96.4 per cent of the ribe eradicated.

Spraying experiments indicated that ribes can be killed with sodium arsenite costing 3½ cents per gallon, with fuel oil at 14 cents a gallon, and with dip oil at 50 cents a gallon. A dilution of one part dip oil to 5 or 8 parts of fuel oil is recommended.

In the future the Conference will be known as the American Plant Committee and plans are underway to broaden the scope of its activities to keep pace with the change in name.

C. N. Woods, Assistant District Forester in charge of Grazing at Ogden, is in Washington on detail.

J. V. Hofmann, in charge of the Wind River Experiment Station, is in Washington on detail. En route East Mr. Hofmann stopped off at the Laboratory and at St. Louis where he presented a paper before the Ecological Society on the Establishment of a Douglas fir forest. Since he has been in Washington the weather has behaved admirably, which fact is without doubt much appreciated by Mr. Hofmann, because his trip from the Wind River Experiment Station to Carson was made in snow three to four feet deep, and the thermometer at 13° below zero.

Iwao Katayama, a member of the Central Laboratory and professor of the Keijo Technical College of Chosen, Korea, was a recent visitor at the Forest Service in Washington. Prof. Katayama is a chemist and is interested in certain phases of forest products work. His main interest was in pines of the United States of value for turpentine and suitable for introduction into Japan.

I Wilkansky, Agricultural Engineer and Joint Director of the Agriculture and Colonization Department, Zionist Palestine office, was a recent caller at the Forest Service. Mr. Wilkansky plans on making a study of reforestation methods in the sand dune regions in the Southwest and southern California in connection with similar work in Egypt.

District 2 - Rocky Mountain District

An interesting page feature on Miss Helen Dowe, the woman lookout of Devil's Head, Pike National Forest, illustrated with cuts, appeared in the January issue of "Illustrated World." There is also an article on the results of deforestation in the same issue.

At a recent Land Office sale of timber within the Minnesota Forest, white pine was sold at $18.61 per thousand feet and Norway pine at $16.11 per thousand feet. Three bids were received. This timber had no sale value a few years ago. It is located on six separate forties south of Schley, approximately five miles from the railroad. The purchaser is required to burn brush as logging proceeds and 10 per cent of the timber on the area is reserved from cutting for seed tree purposes. Six hundred thousand feet were included in this sale.

Supervisor Marshall states that a local lumber concern has indicated that timber around Cass Lake is worth at least $30 per thousand feet and that a good many acres would be worth from $800 to $1,000 per acre. These figures indicate the extent to which timber values on the Minnesota Forest and in the vicinity have increased during the past few years.

District 3 - Southwestern District

Greetings for the New Year were sent to members of District 3 by the District Forester. This is what he said:

"On the eve of the New Year most of us like to look back over recent years and their accomplishments, and then in the light of our own mistakes make resolutions for the future.

District 3 may well congratulate itself on its war record and its earnest effort to get back on an effective peace footing in the face of all obstacles. The past year has seen much constructive work done and much progress made along general lines. We have been more and more getting back to fundamentals--thinking more of grazing in its effect on Forest replacement and fire, even the seemingly unimportant ground fire, in the same way. This is one of the most hopeful signs of all.

District 3 - Southwestern District (Cont.)

About once in a quarter century Nature gives District 3 a splendid seed crop and with it a fine opportunity to secure assured reproduction where most needed. The past year has given us our first chance to show what foresters can do with such an opportunity in the Southwest. During the coming year and future years the protection of this seedling crop is going to be one of our principal considerations. We must keep it in mind in all phases of our Forest administration, particularly in our grazing and fire protection work. Let us, as one of our biggest resolutions this year, resolve to keep this always in mind.

The outlook for more stable conditions in our personnel is better than for years. I refer to the work of the reclassification committee but more particularly to the efforts being made by Col. Graves and the Secretary of Agriculture to place field men on the miscellaneous roll, and the general interest shown in government salaries and the personnel situation as likely to reflect in the quality of public service rendered. I am very hopeful of the outcome.

The New Year opens up to me personally a larger field for public service, for the Forester has today announced my appointment as District Forester here in Albuquerque. There is no post in the Forest Service that so appeals to me, for after sixteen years of service in this District, I am very proud of District 3, its accomplishments and its personnel, and I know I will have your support and cooperation in fulfilling my new obligations.

My hope is that the New Year will be full of happiness, prosperity, and progress for each and every one of you, and for the District as a whole.

FRANK C. W. POOLER,
District Forester.

-- The "natural paper" recently found in one of the lakes in this district and forwarded to the Forest Products Laboratory was submitted to the Botanical Department of the University of Wisconsin. The material has been identified to consist entirely of algae of the Oedogonium species. The theory advanced by Mr. Tiemann is that the lake became filled with growing algae which died during the dry season and formed a matted surface on the bottom.

Four wild turkeys have been turned loose on the Catalina Game Refuge, on the Coronado Forest. They were sent by State Game Warden Joe V. Prochaska, who has promised to furnish eleven more birds in an effort to restock the Catalinas, at one time a good turkey-hunting ground.

Through the construction of watering tanks for cattle by four progressive permittees on the Guadalupe Division of the Lincoln Forest, 10,000 cattle and horses graze on this area as against about 3,000 head that were to be found there in 1910.

National Forest Examiner Kissam is now in Albuquerque, having been in the field on trail work since June. Mr. Kissam busied himself during the summer logging out and constructing the Alamo Canyon trail on the Lincoln, Rock Creek and Rucker Canyon trails on the Coronado, and Verde Division trail on the Prescott, making a total of 30 miles of Class A trails.

District 5 - California District

Continuous airplane fire patrol of the Angeles National Forest between May 1 and October 31, with a minimum of two planes in daily operation, is urged by the Southern California Section of the Sierra Club in a resolution recently forwarded to Washington.

So important does the Sierra Club consider timber and brush as a factor in conserving the water used for irrigation by citrus and other agricultural industries of Southern California, that the resolution includes recommendations by which one-half the cost of the airplane patrol would be met by Los Angeles County.

District 5 - California District (Cont.)

Lewis Carrigan has resigned to accept the position of Secretary of the Northern California Counties Association with headquarters at Redding. Mr. Carrigan spent 12 active years on the Klamath Forest and had just been transferred to the District office when the flattering offer came to him.

Added protection to California's fish and game is assured by a cooperative agreement executed by Game Commissioner Carl Westerfeld of the Fish and Game Commission of California and the Forest Service.

"Wild life on the National Forests in California is a resource which, besides being of great economic value, adds materially to the enjoyment of the Forests by the people of the State," says Commissioner Westerfeld in commenting on the agreement.

"Since the Forest Service is entrusted with the management of the National Forests, on which both fish and game are plentiful, and since the protection and perpetuation of that fish and game is a duty delegated to the Fish and Game Commission by the State, I consider the cooperative agreement a most happy one," he continued.

The stocking of forest streams with trout from State hatcheries and active assistance in the enforcement of all game laws by Forest Rangers, together with provisions by which Game Wardens will receive appointments as Fire Wardens, are points covered by the agreement.

In the course of thinning a 43-year old stand of yellow pine in the northern Sierras, 42 trees above one inch in diameter were removed from half an acre, taking out the suppressed and getting into the upper crown classes to insure growing space for all the trees left. Cutting was done the first of June, the tops being lopped and scattered. The poles were not removed at the time of cutting, though piled to facilitate wagon loading, and in a short time afterwards the stand was infected with bark beetles.

Some of the trees were killed by the heaviness of the attack, others had not yet, up to October, succumbed to the pests, while still others were but slightly hurt.

A detailed examination of the area indicates that the most damage was done in the larger size classes, since 50 per cent of the trees above 8 inches were attacked successfully. The piles of poles served as attraction for the insects at the start, for 65 trees, or 2 per cent of the total number attacked, were those near piles or on which the piles leaned. On the other hand, the closeness of the pile was offset by the size of the tree when the trees were about 8 inches.

The degree of injury was also in close relation to the nearness to the down material, those in the 7-inch group and above being much harder hit than those below.

The fact was also brought out that while the larger sized classes are more heavily attacked, a higher percentage of the total trees attacked was in the smaller sized classes. For instance, of the 25.8 per cent total there was 16.2 per cent in the 5, 6 and 7-inch classes, or 62.5 per cent of those infested, although the infestation of those below 7 inches is negligible. Of the 8.9 per cent of trees killed, 6.9 per cent or 77.5 per cent of the total were in the 6, 7, 8, 9, and 10-inch classes.

District 6 - North Pacific District

Mount Katmai and the Valley of Ten Thousand Smokes were introduced to Portland during December by Lucius G. Folsom, assistant to Robert F. Griggs, director of the several expeditions sent to Alaska by the National Geographic Society for exploration of the region affected by the eruption of Mount Katmai. The Valley of Ten Thousand Smokes and Katmai Volcano are near the Chugach Forest and on the west side of Cook's Inlet. National Forest Examiner Asher Ireland, who knows the Chugach, says that the vapor of the volcano is plainly visible from the Forest and often so blown about by wind that the mountain itself becomes visible. Also that on the Tongass, 500 miles further east, he has seen ashes from the explosion of June, 1912, covering parts of the forest floor with a silvery and frostlike formation. As Mr. Folsom mentioned in his address, the 1919 expedition included H. K. Wallace, who resigned his position as ranger on the Oregon to accompany it. So the entertainment had personal interest for D-6 people. The Volcano and Valley may be reached from Cordova, where the Chugach Supervisor has his headquarters, by a steamer of

District 6 - North Pacific District (Cont.)

the regular line plying between Seattle and Seward as far as Seward; at Seward a mail boat may be taken to Kodiak Island, and a boat chartered at the Island to cross Shelikof Strait to the mainland of northeastern Alaska at a point from which the Volcano and Valley are most easily accessible by foot, dog team, or pack horses. Mr. Folson's talk and pictures were good. Those who heard and saw them felt the reality of the strange new wonderland of vapors, bubbling fissures, coloration, configurations, ash dunes and slides, glaciers, lakes, and volcanos.

The District Forester has received a resolution duly signed, sealed, and attested by the commissioners of Skamania County, Washington, thanking the Forest Service and the Bureau of Public Roads for the great assistance rendered on the North Bank Highway and other important roads in Skamania County. The North Bank (Columbia River) Highway, in Washington, is connected with the south bank, or Oregon, road (officially named Columbia River Highway) by the interstate bridge and, 65 miles further east, by ferries plying between White Salmon, Washington, and Hood River, Oregon, thus making a scenic loop road up one side of the Columbia and down the other.

A permit has just been issued by the District Forester allowing the Northwestern Turpentine Company, Portland, to extract the pitch from 160 acres of Douglas fir on the Umpqua Forest. This Company is pioneering in a new industry, which, if successful, will increase the value of Douglas fir and also materially augment the country's waning supply of turpentine. It will bore old and pitchy Douglas firs for the resin stored in cracks and seams of the wind-shaken trees. The product thus secured will be manufactured into turpentine and rosin at the Company's distillery in Portland. This permit is the first of the kind granted by the Government to a naval stores operator.

The Lake Quinault region of the Olympic Forest, northwestern Washington, has been inspected recently by Fred W. Cleator, of "Lands," preliminary to its development as a recreation center. Accompanied by Forest Examiner A. A. Griffin, of the Olympic, Mr. Cleator planned on the resurveying made necessary by a new road and picked out two camp sites for future development. The Olympic Highway, now under construction, adjoins the south side of Lake Quinault and is completed from the lake south to Hoquiam. This road is to lead through a region of magnificent Douglas fir, which it should display to tourists, but Mr. Cleator fears its value for this purpose will be seriously impaired unless something can be done to check timber cutting along the route outside the Forest. He says that while the people are enthusiastic over the proposed development, and recently voted bonds for the Olympic and other scenic highways, they do not seem to realize the importance of the timber as a scenic asset and the need of safeguarding roadside strips.

Assistant District Forester Fred E. Ames is back at his desk in Silviculture after two years' service in France with the Twentieth Engineers. During the War Captain Ames was in charge of Co. B, of the 7th battalion, which carried on a logging and milling operation in central France. After the Armistice he was attached to the Bureau of War Damages of the American Peace Commission for two months, and later served as American Delegate on the interallied committee which dealt with the timber acquired from French forests for the American Army. While on the Peace Commission Captain Ames had a good opportunity to observe the damage wrought on French forests by the War.

A former erroneous distribution of National Forest money among the counties of Oregon by the state has been rectified in accordance with a law enacted at the 1917 legislature, under which counties previously either overpaid or underpaid have effected a settlement among themselves. Credits allowed under this arrangement vary from $1.12 which Benton County received to $2,875 paid Crook County. Also the secretary of state has finished distribution of $115,405.74 recently received from the Forest Sergice for distribution among the counties. Of this Wallowa County received the largest share, $26,720.75, and Malheur the smallest, $89.16.

The road program of Lane County, Oregon, is being planned so that heavy blasting will take place early in January, to avoid destruction of the eggs which will be in incubators and under hens later in the season. Experience has proven that eggs in the near vicinity of blasting do not hatch. The poultry industry is important in Lane County. Hence this decision of the commissioners.

During the snowstorm Forest Ranger Albert Wiesendanger, accompanied by his wife and infant daughter, undertook to come by automobile from Eagle Creek Ranger Station to Portland, where a Forest Service trespass case demanded Mr. Wiesendanger's presence. The snow being but a foot deep, all went well the first ten miles down Columbia River Highway. At Oneonta Gorge the car ran into a snowbank piled up in the center of the road. All attempts to get the car out of the drift proved futile. Mr. Wiesendanger remembered that he had passed a building under construction at Horse Tail Falls, walked back, found two carpenters there, and requested their help. They gave it, furnishing shovels and accompanying him to the automobile, which finally was extricated and taken back to Eagle Creek. The next morning a trail was broken from the ranger station to the depot. That afternoon, owing to delayed trains, the Wiesendangers waited five hours in an open flag station,--temperature four below,--until a local train arrived.

In the "Weekly Bulletin" of December 8, 1919, a paragraph in the D-7 letter has a special interest for D-6 because in describing the Stony Creek working circle, of the Cherokee Forest it seems also to describe the "fine little agricultural valley, surrounded, horseshoe fashion, by (Wallowa) Forest lands" which is a feature of D-6. "At the mouth of the horseshoe is the town of" Wallowa, headquarters of the Supervisor of Wallowa Forest, containing--not "several forest utilization plants," as does the D-7 Elizabethton,--but one thriving sawmill. Practically all of the woods work is performed by the farmers during the season when they are not engaged in agricultural work," in the valley protected by Wallowa Forest as in the valley protected by the Cherokee Forest. Wallowa Forest is in the extreme northeast of Oregon, separated from Idaho by the Snake River and from Washington by a small area of patented land. The horseshoe that it forms incloses, besides Wallowa, the thriving towns of Enterprise and Joseph; the latter of special scenic importance because of its nearness to Wallowa Lake, which lies at the edge of the Forest.

The road program of Columbia Forest cooperating with Klickitat and Skamania Counties has reached a point from which Mount Adams, of the Cascade Range and in the Columbia, is apparent as a future playground of the people. A recent issue of the Oregon Journal says:--"Although it is one of the trio of snowy peaks that rim the horizon about Portland, Mount Adams is less well known here than Mount McKinley or Mount Katmai. A few mountain climbers of explorative turn have from time to time returned with tales of flower-carpeted hanging gardens threaded with crystal streams and pendant between ponderous glaciers. Peculiar rock formations are spoken of, some of them resembling castles of giants. * * * Any movement that will make Mount Adams accessible to travel around its base and upon its high slopes will contain the comfortable expectancy of adding another great throng to the 'summer kingdom of America.'" Mount Adams lies north of the Columbia River, in Washington.

That fires burned on Columbia Forest long before the coming of the white man, is indicated by a specimen of petrified wood in Supervisor Brundages's office which plainly includes burnt portions. So natural are the charred layers that one almost expects to find them soft to the touch.

"The Natural Parks Association" has been incorporated under the laws of the state of Washington, to preserve natural beauties; advocate creation of parks and building of highways connecting the same; preserve lakes and streams from pollution; conserve the supply of food and game fishes; protect wild animal life; encourage love of nature; and preserve in their original state forests that are essential to scenic beauty. It will also endeavor to bring about trades of public land not desirable from a scenic standpoint for privately owned lands on which the timber should remain untouched (in Washington state legislation to provide for such trades will be needed). The new association relies upon cooperation of logging companies, timber owners, state, county, and municipal governments, and the Forest Service; and offers its help to all agencies having like purposes. Regular membership may be had by payment of $2 annual dues; associate (or supporting) membership costs $10 per year.

The Natural Parks Association will conduct a campaign against destruction of trees along state highways. In this work it has a strong ally in the Automobile Club of Western Washington, which--in connection with its campaign for good roads--seeks to preserve the forest scenery skirting all principal highways in the Northwest. The Automobile Club's resolution against the cutting of trees along the highways has been adopted by the Washington State Good Roads Association. The Club has urged that all civic bodies, chambers of commerce, rotary clubs, and auto associations petition the State to acquire strips of timber along highways, and suggests trading other lands for the scenic roadside strips.

Forest Examiner William B. Osborne, Jr., has returned from Duluth, Minnesota, where he had been summoned as a witness for the Railroad Administration, to give expert testimony as to what fire can be expected to do under given conditions, in a test case brought against the Railroad Administration by Jacob Anderson, who sued to recover for property loss and damage resulting from the Kettle River--Moose Lake fire, which occurred October 12, 1918, and in which 418 persons and millions of dollars worth of property burned.

This test case gave a valuable opportunity for fire study, in which Mr. Osborne specializes. He uncovered some specially interesting data as to climatic conditions prevailing at the time of the fire. He found 1918, from January 1 to October 12, to have been the dryest year of the 47 last past; October 12 to have been the day of lowest relative humidity recorded during June, July, August, September, and October, for 31 years, and of highest wind velocity (65 miles per hour) of any day within the same months for 47 years, with the exception of September 16, 1881. Thus he discovered a record-breaking combination of extremes in the three principal climatic factors which govern the spread of forest fires. Based on the law of averages, such extremes would not recur in combination on the same day once in 2,195,619 years. Mr. Osborne says an interesting parallel to these conditions existed September 1, 1894, the day of the Hinckley fire,--also in Minnesota and in the same region as the Kettle River--Moose Lake fire,--classed as one of the most disastrous conflagrations that ever occurred in the United States. He found September 1, 1894, to have been the dryest day but one (counting out October 12, 1918) within 47 years. Also that precipitation during June, July, August, and September of 1894 was, with the exception of that recorded for 1918, the lowest on record for 47 years, with an average wind velocity of between 30 and 40 miles an hour.

The observation station at Duluth of the U. S. Weather Bureau, from which Mr. Osborne secured his information, is 30 miles from the area of the Kettle River--Moose Lake fire and 60 miles from that of the Hinckley fire. It is completely equipped and has been maintained for 47 years.

In the test case Anderson claimed the conflagration started from a small bog or peat fire which had been smoldering for from six to eight weeks along the right of way of the Soo line. The Administration contended that it started nearly twenty miles away, to the northwest, and traced by a large number of resident witnesses its extremely rapid advance over a strip of country nearly thirty miles long on the afternoon of October 12.

District 7 - Eastern District

Supervisor Fahrenbach of the Natural Bridge Forest was made happy the other day by receiving the following letter:

> I also wish to congratulate you on the condition of the trails through the Forest territory. It has been my pleasure in the last three years to go over nearly all of the trails and found them all excellent. I especially recall a trip over the trail from Parker's Gap to Apple Orchard Camp in August of 1918. As you will remember, the Scouts of Roanoke had their

summer camp on Middle Creek near its junction with Jennings Creek not far from Arcadia. John Ellis and I were partially in charge of the boys at that time. The two of us decided one afternoon to take a trip to Apple Orchard Mountain, neither of us having any idea of the distance to that point of interest. To make a long story short, darkness caught us on the side of Apple Orchard and we were forced to return to a squatter's cabin down in North Creek Valley. By good luck, we found a man there who was making the trip to the Camp that night over the mountain. Ellis and I followed this man, who was on horseback, by way of Parker's Gap, thence over your trail to Apple Orchard Camp. The night was so dark (none of us had any lantern or searchlight) that it was at times impossible to see the horse only a short distance ahead of us. We made the entire trip and, most unusual for mountain trails, we did not stumble once the entire way nor were we struck by any projecting branches, though the trail led through very rocky and wooded mountain country. Neither did we strike any heavy grades. It was impossible to believe we had actually climbed the mountain (the highest, I believe, in the Natural Bridge Forest) as the grade was so gradual. I do not relate this story in order to bore you, but the incident so plainly shows the excellent condition of the trails in your forest that I feel I ought to express my appreciation of the efficiency of your service to the recreation-loving public.

With kindest regards, I beg to remain,

Very sincerely yours,
(Signed) E. T. McNamee.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

January 19, 1920.

Business is Good

Receipts from the National Forests show an increase of $214,940.91 for the first six months of the current fiscal year as against the income for the corresponding period during the previous year. The total receipts to date are $911,825.63.

Timber sales contribute the largest increase--$203,623.06. Cattle and horses come next with $11,726.30 and special uses with $7,527.11. Every district except District 3 has an increase in the total receipts to its credit.

The rank of the districts in timber sales and grazing is as follows:

Timber Sales	
District 5	$215,584.67
District 6	201,866.15
District 1	160,486.80
District 2	158,598.14
District 3	91,445.26
District 7	80,652.43
District 4	39,250.23

Grazing	
District 3	$32,273.51
District 4	14,319.41
District 2	12,643.31
District 1	8,506.11
District 5	5,893.84
District 6	3,374.74
District 7	1,791.97

Program for Supervisors' Meeting at Albuquerque

The preliminary program for the third Supervisors' Meeting for the Southwestern District gives promise of very interesting sessions. The participation of public officials and prominent men of affairs in the program is particularly gratifying and to get such cooperation indicates clearly the impression the personnel of the Southwestern District has been able to make in that region.

The speakers from outside of the Forest Service that are listed to take part in the meeting, with the subjedts of the addresses, are the following: T. W. Riordan, president of the Arizona Lumber and Timber Co.--"Forest Service Timber Sales from the Viewpoint of the Lumberman"; Col. Fred S. Breen--"Recollections of an Old-timer; Eduardo M. Otero, president New Mexico Wool Growers' Association--"Forest Range Problems from the Viewpoint of the Sheepman"; Victor Culberson, president New Mexico Cattle & Horse Growers' Association--"Forest Range Problems from the Viewpoint of the Cattleman"; J. S. Ligon, U. S. Biological Survey--"Predatory Animal News"; Chas. Springer, chairman State Highway Commission--"The Good Roads Movement in New Mexico."

The sessions will begin Monday morning and extend through to Saturday afternoon. The main program will cover fire problems, organization and personnel; the National Forestry Program; timber sale problems; range reconnaissance and grazing business; information, recreation, educational, and exhibit work; and roads and trails.

The last day will be given over to the consideration of committee reports and resolutions. Before the Forest Supervisors disperse to their headquarters it is planned to take up allotment matters individually. The prospects are that there will be a busy time for all concerned.

Second Southern Forestry Congress

The Second Southern Forestry Congress will be held at New Orleans, Louisiana, on January 28 to 30, 1920.

Colonel Graves will speak on the afternoon of the first day on "The National Policy of Forestry." The presentation of the paper will be followed by a discussion from the viewpoints of the lumber industry, the wood-using industries, and the live stock industry. Mr. Peters will be the presiding officer for the morning session of the second day.

Second Southern Forestry Congress (Cont.)

Some of the other papers to be presented are: South Appalachian Region by J. S. Holmes, State Forester of North Carolina; Atlantic Coast Region by Austin Cary, U. S. Forest Service; Gulf Coast Region by R. D. Forbes, Superintendent of Forestry, New Orleans, Louisiana; Central Hardwood Region by R. S. Maddox, Forester, Tennessee Geological Survey, Nashville, Tennessee; The Naval Stores Industry, by C. F. Speh, Secretary Turpentine and Rosin Producers Association, New Orleans; The Paper and Pulp Industry by McGarvey Cline, Consolidated Naval Stores Co., Jacksonville, Florida; Projects of Forestry Committee of the National Research Council, by Dr. H. E. Howe, National Research Council, Washington, D. C.; Land Classification by H. T. Corey, Construction Engineer, U. S. Reclamation Service.

The Louisiana Forestry Association will hold a session in conjunction with the Congress on the last day. Advantage will also be taken of the presence of foresters by the organization of a section of the Society of American Foresters for the South.

Some Recent Pen Work

Members of the Forest Service during the past three months have made available for publication in magazines and periodicals a large number of articles. The list follows:

SEPTEMBER

Title	Author	Publication
Good Roads for the National Forests	John L. Cobbs, Jr.	Motorist, or some other good-roads magazine
Reconstruction and Readjustment Activities of the Forest Service	Herbert A. Smith	Council of National Defense, through Secretary of Agriculture
Numerical Relation Between Cells and Treatments in Extraction Processes	L. F. Hawley	Journal of Industrial and Engineering Chemistry and other trade journals
Wood Chemistry	L. F. Hawley	Technical journals
Prima Vera as a Propeller Wood	G. E. Heck	Technical journals
Law Enforcement on the National Forests California District	C. L. Hill & C. V. Brereton	Police Journal
Forest Growth in the South	W. R. Mattoon	American Forestry
Production of Tight and Slack Cooperate Stock	Albert H. Pierson & Franklin H. Smith	In pamphlet form by cooperators with Forest Service
Moisture Resistant Finishes	M. E. Dunlap	Through National Advisory Committee

OCTOBER AND NOVEMBER

Title	Author	Publication
Box Handbook	------------	Through National Box Manufacturers' Association

OCTOBER AND NOVEMBER (Cont.)

Title	Author	Publication
Determining the Killing Factor for Blacktail Deer in the Southwest	Aldo Leopold	Journal of Forestry
Box Construction	D. L. Quinn	Southern Pine Salesman
Early English Forest Regulations	John D. Guthrie	Journal of Forestry
What our Forests Support	Franklin H. Smith	American Forestry
Glues in the Woodworking Industries	S. W. Allen & T. R. Truax	Timberman
Manufacture of Plywood	S. W. Allen & T. R. Truax	Canadian Woodworker
Federal Road Aid in the Eastern National Forests	John L. Cobbs, Jr.	Southern Good Roads
The Road Program for the National Forests	John L. Cobbs, Jr.	Highways Greenbook
Export Cases	J. B. Frear	Paper Industry
Nails and Nailing	J. B. Frear	Manual Training Magazine
The Forest Policy of France - 3. The Control of Sand Dunes and Mountain Torrents	W. B. Greeley	American Forestry
Map and Chart Covering the Distribution of Western Conifers	W. H. Lamb	Outside journals
Relation Between Viscosity and Penetration of Creosote into Wood	Ernest Bateman	Chemical and Metallurgical Engineering and other trade journals
Significant Trends in Lumber Production in the United States	Franklin H. Smith	American Forestry
The Shrinking and Swelling of Wood	Arthur Koehler	American Furniture Manufacturer
	DECEMBER	
A Turkey Hunt in the Datil National Forest	Aldo Leopold	Wild Life
Economic Conditions in the Lumber Industry in the United States	S. L. Wolfe	The American Contractor
Recreational Uses of Colorado's National Forests	W. I. Hutchinson	Delineator

Some Recent Pen Work (Cont.)

DECEMBER (Cont.)

Title	Author	Publication
The Present and Future Supply of Raw Material for the Paper Industry of the United States	Austin F. Hawes	American Forestry
The Forest Policy of France:-- 4. Private Forestry in France	W. B. Greeley	American Forestry
The Suitability of Cotton Hull Fiber for Pulp and Paper Manufacture	Otto Kress	Trade journals

Special Use Permits

The challenge to the entire Forest Service issued some time ago by the Chugach Forest as to variety and number of special use permits was accepted by the Coconino Forest, in District 3. The Coconino made a showing of 26 kinds of permits, with 670 in effect. Now District Five produces statistics which show special uses not found on either of the other Forests. The Angeles Forest, in California, has permits for boat landings, dams, fish hatcheries, oil tanks, revetments, rifle ranges, and photo studios, and includes a large number of residence permits--1,053. In the Angeles list, road and trail permits are given a separate place, as are also agricultural and cultivation permits, while in the Coconino and Chugach lists they are included under one general class. However, even allowing for this difference, the Angeles Forest excels both Districts 3 and 6 in variety and number of special uses.

District 5 takes up the challenge in this manner:

"Since we believe that the Angeles Forest in District 5 has the largest special use business of any National Forest, I am sending you their record as taken from the 1919 annual statistical report. This report covers 33 varieties of uses with a total of 1,552 permits in effect.

Agricultural	19	Railroads	2
Apiaries	12	Reservoirs	30
Boat Landings	2	Residences	1053
Cabins	1	Resorts	28
Camps	21	Revetments	1
Corrals	11	Rifle ranges	1
Conduits	168	Roads	28
Cultivation	11	Schoolhouses	2
Dams	3	Stables & garages	3
Fences, drift	24	Stage stations	2
Fish hatcheries	2	Stores	5
Hotels	54	Studio, photo	1
Kilns, lime	0	Sawmills	2
Oil tanks	1	Telegraph & telephone lines	40
Parks	1	Trails	1
Pastures	11	Transmission lines	5
		Water development	7
			1552

Italy's Lumber Problem

"How to obtain adequate lumber supplies is the problem confronting Italy at present," says H. C. MacLean, Trade Commissioner at Rome.

Before the war Italy was a heavy importer of sawn lumber. Seventy-five per cent came from Austria-Hungary and other countries that were Italy's enemies during the war. To make up the deficiency caused by the stoppage of imports from these sources and the increased demand for war purposes and for fuel, Italy was forced to depend very largely on its own slender forest resources. It is important that in the immediate future as much lumber as possible be obtained from outside sources. In his report Mr. MacLean states:

"The Trentino and Ampezzano are said to contain 780,000 acres of forest lands; Upper Adige, 690,000 acres; Gorizia, 165,000 acres; and Trieste, 3,200 acres; a total of 1,638,200 acres. Istria also contains large forests. It is estimated that these forests (mostly those of the Trentino, Ampezzano, and Upper Adige) produced 130,000,000 board feet of lumber (principally softwoods) annually before the war. The most important forest districts of the former Austrian Empire are Carhiola, Styria, Carinthia, Bosnia, and Transylvania, which before the war furnished to Italy about 75 per cent of the lumber obtained from Austria. In the countries bordering on the Black Sea, large forest resources exist, but these are undeveloped and will be unable, at least for some time, to become an important factor. It is improbable that other European countries will be able to furnish to Italy large quantities of lumber. In Argentina and Brazil, Italian interests have purchased large tracts of timber land, but for the most part these will supply only softwood and wood pulp.

The possibility of large imports by Italy from the United States will depend on prices. Adding the cost of transportation to the already high prices of lumber in the United States and doubling the amount on account of the existing exchange situation, the cost in lire of American timber delivered in Italy is almost prohibitive. If conditions improve, there is no doubt that considerable purchases will be made, but for the time being, it appears that Italy will be obliged to do without a large part of the lumber that it would like to import from the United States."

Government Publications in Boston Public Library

Current publications of the Federal Government will be made available for immediate reference in the Central Library in Boston by placing in a readily accessible room. This is being done in an effort to bring the American people and their Government in closer contact. In making the announcement of the proposed plan the library authorities state that Government documents are not mere compilations of statistics, but that they contain readable information on every conceivable subject. They have matters of interest to the scientist, the teacher, the business man, the housewife, and the workman.

Field officers might act on this suggestion which this plan suggests and strive for wider use of Government publications in their respective communities. In many of the libraries in the smaller communities, the conduct of the library is not a science but a sinecure for some pioneer citizen or other pensioner. As a result, no great amount of interest is shown in using books and particularly Government publications to the best advantage. Instance is known of one librarian who considered herself overburdened in having to handle Government publications that she received and so she asked the authorities to refrain from sending any further publications. Her request was acceded to and so the library in her charge gets none of the Government publications.

During the month of January there will be an exhibition showing the work of the Forest Service. In making announcement the authorities advise their patrons to examine in preparation the following publications:

Location of the National Forests by States
Homesteads in the National Forests
What the National Forests mean to the Water User
Plant Succession in Relation to Range Management
Guidebook for the Identification of Woods used
  for Ties and Timbers
The Use Book
The Country's Forests
Government Forest Work
Forestry and Community Development
The Use of Wood for Fuel

District 1 - Northern District

G. H. Lautz has returned to Missoula from his detail to the Washington office where he assisted in the preparation of the Manual on Road Procedure.

F. W. Beier has been transferred to the Bureau of Crop Estimates as Field Agent. Mr. Beier was a member of the Forest Service since 1910. He started in as Forest Guard on the Coeur d'Alene Forest and later became Assistant Forest Ranger. His various transfers took him to the St. Joe, the Pend Oreille, and the Kaniksu. In 1917 he was transferred to the District office and promoted to Deputy Forest Supervisor. He held down the job of Chief of Maintenance for the past 18 months.

The consolidation of the Custer and Sioux Forests has been effected. The combined areas will be known as the Custer National Forest and the headquarters will be at Miles City, Montana.

The President, on December 27, 1919, signed a proclamation giving notice to the public of the addition of the Thunder Mountain area to the National Forest area in Idaho. The Secretary of the Interior approved the addition of the lands on December 23.

A gross area of 1,095,020 acres was added; of this, 724,455 acres go to the Idaho Forest and 370,565 acres to the Payette Forest.

District 2 - Rocky Mountain District

Assistant District Forester J. H. Hatton made an address at the annual meeting of the Delta County Live Stock Association on December 30. Among the resolutions passed was one favoring control of the public domain outside the National Forests by the Department of Agriculture, under regulations similar to the National Forest regulations.

There was not a very optimistic expression regarding the live stock outlook throughout Delta, Montrose, and Mesa counties in view of the increased competition for spring and fall range on the public domain and the gradual elimination of this resource by the operation of the 640-acre homestead act; in the presence of the alfalfa weevil and the expense of control measures; the presence and occasional heavy losses from whorled milkweed, and winter conditions which are compelling stockmen to feed about six weeks earlier than normally.

In a few sections of the State, particularly Hot Sulphur Springs and other portions of the western slope, the winter feeding of game will be necessary on account of deep snows. The State Game Department is keeping in close touch with the situation and is authorizing the feeding of animals where the need is acute. The largest bunch in need of attention is near the town of Hot Sulphur Springs where there are approximately 300 elk.

Telephone Engineer H. R. Kylie is conducting a series of lectures on telephone work at Cody, Wyoming, for the rangers.

The Senate Chamber at the State House will be used as the meeting place for the Supervisors' Meeting to be held in Denver February 24 to 28, inclusive. All supervisors will be in attendance and a sprinkling of deputies and forest examiners. Messrs. Headley and Stuart of the Washington office are expected to be present.

The Wyoming Tie & Timber Company operating on the Washakie Forest has made application for an additional area of timber to be handled in conjunction with that remaining uncut in their present 125 million ft. sale. It is doubtful if the annual cut of from 300,000 to 400,000 ties can be driven to advantage from the two remaining uncut watersheds in their present sale, and so additional timber is desired in order that it can be drawn on to a sufficient extent to insure the production of the number of ties which the purchasing company has contracted to deliver to the Northwestern Railroad Company annually.

The field management of the sale of the Wyoming Tie & Timber Company has been taken over by the Joyce, Watkins Company of Chicago.

A graduate forester, E. A. Gutches, is now in charge of the Menominee Indian Mill operations on the Menominee Indian Reservation in Wisconsin. Mr. Gutches was formerly in the Canadian Service. He has as his assistants two foresters, one serving as sales manager and the other as logging assistant.

District 2 - Rocky Mountain District (Cont.)

The annual cut of the mill is approximately 25 million feet and consists chiefly of hemlock, birch, and maple, with some white pine, basswood, oak, ash, etc. In addition, ties are hewed from hemlock and cedar, and cedar posts, poles, and shingle timber cut. The hemlock is cut first and the brush piled. Later the hardwoods are cut and the brush piled on top of the hemlock brush piles. Burning is then done later. The logs run approximately 12 to the thousand feet. All logs are skidded directly to the skidway located along the logging railroad. Sufficient spurs have been constructed so that the skidding distance ordinarily does not exceed one-eighth of a mile. Logs are loaded directly from the skidways to the cars by a gasoline jammer, and the cars are hauled to Neopit and logs dumped into the hot pond. The planers are located in a separate building. Wood machines also form a part of the mill and the wood is cut to various lengths from 16 inches to 4 feet. Material suited for lath manufacture is cut into laths.

All timberlands are cut practically clean. Hemlock which is suited for pulpwood is cut to 4 inch diameter. During the past six years successful planting operations have been carried on on areas which are either too rough or too rocky to be held for later allotment as farmlands to the Indians. The white pine seedlings used were 3-0 stock, and the spacing was 10 x 10 feet. The spacing is wide because of the presence of considerable hardwood brush. A still wider spacing is contemplated because of the small number of trees that mature per acre and the presence of hardwoods which will force the pine to clear itself properly. During the spring of 1919, 400 acres were planted.

The labor situation is acute and at the present time it is impossible to secure sufficient men to operate properly the two woods camps. The Indians are not anxious to work for they receive a bonus from the operation of the mill. The annual profit, after paying of stumpage, is about $700,000 per annum, which means that each Indian receives a $500 bonus.

The Denver Post has offered a reward of $25.00 to every person who kills a mountain lion in Colorado. Its purpose is to save deer and mountain sheep from slaughter by this varmint.

District 3 - Southwestern District

Ranger Warnock of the Gila has invented a combination fire tool box and pair of kyacks. The contrivance consists of a pair of wooden kyacks with hinged wooden lids. The rear end of each kyack slides in a groove and is removable. When the ends are removed the two kyacks can be fastened together end to end by an interlocking device and set up as a fire tool box. The idea is that they could be used as a fire tool box and taken apart bodily in order to pack the fire tools which they contain.

Morton M. Cheney, formerly National Forest Examiner and later Assiatant to the Solicitor, has resumed his former job in the Office of Lands in this District, after several months devoted to the practice of law in Phoenix.

In response to a resolution adopted by the District 3 Supervisors' Meeting last winter, the Forester has decided to make a thorough revision of the indexes of the National Forest Manual. Mr. Shepard, of this office, has been selected to do the job.

With deep regret announcement is made of the death of Mrs. Marie Schach on January 5, after an illness of about three months. Mrs. Schach was employed in the district office as map colorist and draftsman since 1910.

The Coronado and Santa Fe Ranger Meetings have passed resolutions expressing a new idea on the old question of "ruts." The resolutions point out that it has been customary to regard a transfer to another district or another Forest as the only remedy for a good man who has been so long in one place that he has got into a groove from which he can not get out. The resolutions propose that prevention is better than cure in such cases and that temporary details on expense to another Forest or district might prevent a good many predicaments of this kind.

Ranger Schoenberg reports that there has been a persistent rumor of a bull elk ranging in the extreme northeast corner of the Chiricahua Mountains. If the rumor is true the elk is probably one of those released in the Graham Mountains or Blue Range in the spring of 1918.

Dr. Long has been working for the past three years on growing pure cultures of the various fungi that cause rot in trees, in order to work out a key for the identification of rot fungi of which the fruiting bodies are not present. One of the most interesting fungi is one from the California redwood, which has a striking resemblance to a rot occurring in the bald cypress of the South. A significant feature of this resemblance is that these two tree species are our only representatives of the forests of the glacial period. Dr. Long is continuing his studies of the influence of rot on methods of brush disposal, and has initiated studies to determine the effect of the interior temperature of trees on the growth of fungi. Western red rot is one of Dr. Long's discoveries and he has determined that this rot--unlike other rots--continues to fruit for several years after the tree is cut. Another problem tacked by Dr. Long is the determination of the rate of rot in burned-over spruce forests of the higher altitudes of this District. Dr. Long believes that the artificial culture of fungi is the first step in the study of fungus tree diseases and has succeeded in growing fruiting bodies in between three and four thousand cultures.

Dr. Long is trying to work out a rule-of-thumb by which the amount of cull in a log due to rot may be determined by the area of rot appearing on the end of the log.

The annual report of Predatory Animal Inspector Ligon shows that 3,804 predatory animals were taken in New Mexico during the past year at an average gross cost of $9.70 each. The fur sales reduce this figure about one-sixth. Ten dollars per dead varmint is a mighty profitable public investment, and the success of the Biological Survey in keeping their costs so low, in spite of the increasing scarcity and sophistication of the wolves, deserves the hearty commendation of forest officers, State officials, sportsmen, stockmen, and the public at large.

The New Year was started for Supervisor Guthrie by the receipt of the following masterpiece from a prospective ranger:

"Forest supervisor taos new Mexico Dear sir i would like Job as assistent Ranger on The san tone if you could use me for the year 1920 i am fimelure with All the ranges all so with the sheep and catle men of that range and saw mill men i speak the Mexican lange Just Bout Same as my owen I Know the most of rules reglarashing of forst Have Handled sheep on range for washower mcClure co i refer you to Mr. ground ore Henry F. Jorden as to my ability to Handle same yours."

Through the generosity of many members of this District, a granite marker has been purchased for the grave of Ranger Robert Bingham, at the Grand Canyon. On the face of the stone are to be carved a large shield and pine tree with this inscription inside the shield:

ROBERT BINGHAM
FOREST RANGER
U. S. FOREST SERVICE
Born August 2, 1892.
Died March 30, 1919.

District 4 - Intermountain District

The Idaho Reclamation Association at its annual meeting held in Boise, Idaho, on January 6 and 7, adopted a resolution expressing its confidence in the Federal Forest Service and recommending that all lands of the State in the public domain, primarily valuable for watershed protection, be included in the boundaries of the National Forests. Commendations from various civic bodies in southern Idaho are becoming quite frequent these days. In accepting these commendations, however, it is well for us to bear in mind that we must continue to so conduct the work of our organization as to merit these commendations and thoroughly live up to the expectations of the people of southern Idaho.

District 4 - Intermountain District (Cont.)

Several pairs of beaver are to be planted in streams on the Toiyabe Forest not used for irrigation purposes and where no agricultural land would be flooded by their dams. It is believed that the presence of beaver dams would lessen the washing of the soil, cause greater uniformity in the streamflow and make more favorable conditions for fish in these streams.

The city authorities of Pocatello, Idaho, have forwarded a request to the District office for the elimination of grazing from the more important parts of the Pocatello watershed.

Professor Carrol of the Utah Agricultural College on his recent visit to the District office stated that the problem of substituting some other method of handling stock for the present detrimental practice of early grazing was a subject the college faculty was eager to get in on and were all eager to contribute to the solution of the problem.

W. L. Hall, formerly Assistant Forester, was a caller at the District office last week. Mr. Hall is now interested in the exchange of land and timber between individuals and the Federal and State Governments, and to develop opportunities for investment in land and timber. His stop at Ogden was in connection with a trip on which he plans to visit each of the western district headquarters.

Resolutions adopted at the recent meeting of Forest Supervisors at Ogden covered a wide range of subjects. Some of the resolutions of wide application and general interest are the following:

Resolved, That a policy of interforest visits by Forest officers be inaugurated.

Resolved, That we approve the principle of training prospective Forest rangers.

Resolved, That horses and pack equipment be furnished temporary men where conditions warrant, and that pack outfits be furnished all Forest officers.

Resolved, That all Ranger Stations be equipped with the ordinary household furniture, including stoves, dining tables, cupboards, bedsteads, mattresses, chairs, kitchen tables, cooking utensils, and dishes.

Be it further resolved, That the denial of grazing privileges be part of the punishment imposed upon persistent trespassers, and that any person thus penalized be regarded as ineligible to grazing privileges upon any other Forest. We suggest publicity of such cases in the Field Program and other publications in order to make the punishment effective.

Whereas, The various Forests are securing a vast amount of valuable information from grazing studies, be it resolved that we recommend the increase of the Studies in force in District 4 and that work along Studies lines be accelerated to the greatest possible extent.

District 6 - North Pacific District

The Forest Service helped build the "Morning Oregonian's" 1920 special edition. Eight stories were furnished for the issue. The first tells of the road construction in the Oregon Forest that is to make Mount Hood easily accessible, opening up magnificent new playgrounds, and providing a route for quick transportation of fire fighters and equipment. Reforestation on fire-swept areas that would not renew themselves is interestingly described in a sketch which makes clear the evil of repeated burnings, and gives a history of artificial renewal from its experimental stage in 1908 until now, when 2,000 acres annually are reforested in Oregon and Washington. The proposed Skyline road, along the crest of the Cascades from Mount Hood to Crater Lake, is exploited with reference to its scenic grandeur, its limitless possibilities for recreation, its value in transporting fire fighters and equipment, and its economic advantages in opening up new grazing areas, and "binding heretofore separate sections of the State." Scenic areas whose development the Forest Service has undertaken or is to undertake are told of in a sketch which appreciates both the esthetic and commercial value of timber and explains the opportunities and advantages of National Forest camp grounds and summer home sites. An article on the timber resources of Oregon gives interesting facts concerning our hardwoods and their uses. How seedlings for reforestation are grown at Wind River Nursery and problems in otherwise preserving the forests are worked out at Wind River Experiment Station are told. The work and personnel of reconnaissance crews are described, and the history of Forest Service cruising and mapping in Oregon given--with reference to possible future use of airplanes and aerial photography. And a story based on Forester Graves' "A Policy of Forestry for the Nation" sets forth the need of concurrent harmonious action in carrying out the necessary forestry program.

The year 1920 on the Siskiyou Forest finds the suspension bridge that carries Rogue River Trail across Rogue River near the town of Galice and the northeast boundary of the Forest reconstructed. To avoid closing the suspension bridge artificial piers were substituted while the new ones were being built. So complete was the reconstruction that only a slight trace now remains of the original bridge. Though the reconstruction involved expert workmanship, it was achieved entirely by Forest officers assisted by unskilled labor temporarily employed. Next summer, when the bolts in the bridge are tightened, the timber will be shot with a preservative, probably creosote. This bridge derives its importance from the importance of Rogue River Trail, which crosses the northern part of the Siskiyou, a distance of 78 miles water grade. The Trail makes a highway between the town of Agness and its surrounding country, near the northwest boundary of the Forest, and the town of Almeda and its tributary region, northeast of the boundary. Also it opens up a vast pleasure ground, as it follows the beautiful, "temperamental" Rogue River, famed for good fishing, through a particularly attractive region of southern Oregon. Travel over it is constant and heavy. During 1919 about four miles of new trail were built 15 miles west of the suspension bridge, at a cost of about one thousand dollars a mile. This newly built section leads through rock in a mountainous country, where it hangs onto bluffs along the river. It will be continued four miles further during 1920.

Hunting with the camera is an attractive form of Forest recreation in this district. During the recent almost unprecedented snowstorm, three camera hunters found their way to Eagle Creek, where they secured good pictures of the Highway Bridge, the registry booth, Eagle Creek bridge, and the ranger station with its flag frozen stiff. The photographers had their lunch at the snow-heaped Camp Ground table and unselfishly shared their catch with the public by allowing the pictures to be reprinted in the "Sunday Oregonian," with an appropriate story written in the District Forester's office.

The Oregon State Chamber of Commerce has indorsed the resolution of the Association of State Highway Officials, at its recent meeting in Louisville, Kentucky, that Congress should be requested to appropriate one hundred million dollars a year for a period of five years for construction of post roads, and ten million a year for a period of ten years for construction of links across National Forests to connect with the important roads built up to National Forest boundaries by States and counties.

A Hood River County delegation called at Supervisor Sherrard's office recently in the interest of a road between the town of Dee, in Hood River Valley, and Wahtum Lake, on the Oregon Forest, now reached from Hood River by the Herman Creek Trail. Mr. Sherrard assured them that if the County built to the Forest boundary the Service would in all probability complete the road to the Lake.

Two camping parties stopped for the night at Eagle Creek Camp Grounds in December. They burned parts of two camp tables and pulled up one of the guard posts that had been set to keep cars on the main road. They also took parts of several other tables and used them to sleep on and to fasten their tent. Ranger Wiesendanger arrested both men and instructed them to report to Supervisor Sherrard. As they were out of employment and had large families to support, they were not taken to court; instead the case was settled by their pleading guilty to a charge of disorderly conduct and paying a fine of five dollars.

Forest Examiner Walter H. Leve has recently returned from making a plane table survey of a portion of the Cispus area on the Rainier Forest. This area was burned over for the first time in the big fire of 1902 and was reburned in the summer of 1918. Before the fire of last year there was a fairly good reproduction of Douglas fir on the greater part of the area, but most of this was destroyed in the 1918 fire. About 80 square miles were burned over last summer. While a certain amount of this will restock naturally, either from occasional small areas of seed trees that survived both fires, or from reproduction that survived the last fire, there are large areas that are completely denuded of coniferous growth. As the larger part of this land is capable of producing good Douglas fir timber, there is considerable planting to be done.

At the present time this area seems to be a paradise for hunters, and it is estimated that several hundred deer were shot there this fall.

The passer of worthless checks, Karl Brandenburg, has been arrested in Ketchikan, Alaska. In his trip up the coast he left a trail of worthless checks. He succeeded in this on the strength of a letter of introduction from the California State Forest office, a forester's badge, and some nerve.

Deputy Forest Supervisor Carl B. Neal recently brought from the Still Creek planting area a hemlock stump, which had been gnawed by beavers. It is 25 inches above and below the point where it has been gnawed, and 4 inches at the point where the beaver has been working. Beavers are plentiful along Still Creek where they occasionally cause a tree to fall.

The article appearing in the Bulletin of October 28 under the caption "Satisfying the Fiscal Agent," fails to live up to its title. It does not satisfy him. The Fiscal "Agent" purges himself of all blame for the Ranger's failure to note in his expense account that he spent perfectly good Government time "watching his chance to walk." He "passes the buck" to the authorities for whom he acts as agent; i. e., Congress who enacts the laws and the executive officers who formulate the regulations. Should the Fiscal Agent through his silence evidence guilt in the case of the footsore Ranger, he could also be convicted on the charge of being fully responsible for Forest officers' salary checks not being two or three times larger than they are. He has been tried and acquitted on both counts under the law governing the authority (lack of) of Agents. Trial of the principals is not recommended.

Fallen Douglas fir timber dead for 50 years, recently sold by the Siuslaw to local mills, is said to be making good lumber. On the other hand, nearby dead timber that is standing is fit only for cordwood. One explanation, given by Supervisor Shelley, to account for the difference in value between this standing and fallen dead Douglas fir, is that worms infest the standing timber to a greater extent than the fallen.

Acting Forest Supervisor R. S. Wallace and his assistants are busy preparing to give 1920 recreation seekers a better time than ever before in the region where "From the Cascades' frozen gorges, leaping like a child at play, Widening, widening through the valley, bright Willamette glides away." Forest rangers are making signs to mark all the trails along the Mackenzie River and in parts of the Willamette River mountain country. Also benches, fireplaces, and tables will be placed in the most beautiful scenic spots. A folder map which the Cascade has in preparation is specially designed for information and convenience of visitors.

Passage of a law permitting organization of cut-over land districts was recommended by the state chamber of commerce at its meeting to outline policies for 1920. District Forester Cecil addressed this meeting on Forest Roads.

"Exhibits" has been asked to cooperate in an "Open House" to be given by the Engineering Schools of the University of Washington, Seattle, in April. The chairman of the committee for the School of Forestry, Allen K. Moody, formerly a ranger on the Olympic, called at the District Office during the holidays to enlist interest in the coming exhibition. He intends that Forestry shall have a more important place at the "Open House" this year than Lumbering or Milling. He says that in the past it has seemed easier to play up milling, logging engineering, etc., than tree growth, nursery practice, scaling, cruising, or fire studies. Mr. Moody feels that the work of the Forest Service should be better illustrated than it has been.

District 6 - North Pacific District (Cont.)

That homing pigeons should hatch in the loft to which they are expected to return from flights, is the conviction of Supervisor Macduff, partly as a result of recent experience in Eugene with pigeons brought from Camp Lewis. He liberated them for exercise, and thought them lost until he heard from them at Camp Lewis, near Tacoma, Washington, about 220 miles from Eugene. On the other hand, pigeons carried several miles into the Umpqua Forest and liberated there have come back to the Eugene loft. However, Mr. Macduff desires to have as many as possible of the birds hatched in the loft at Eugene. These pigeons were left in his care when the rest of the forest airplane patrol equipment was taken from Eugene to Mather Field at the end of the 1919 fire season. Five or six of them deserted Eugene for Camp Lewis during the airplane patrol season last summer.

District 7 - Eastern District

Representatives of the Pathe Review have been paying Supervisor Rhoades of the Pisgah Forest a visit and before long the movies will show some logging, galax gathering, and fire-fighting pictures. Supervisor Rhoades writes that he has persuaded the photographers to return next June when the weather is more seasonable for the taking of scenic stuff.

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

January 26, 1920.

As Others See Us

That there is an increasing appreciation of the National Forests from the recreation standpoint is indicated by the attention given the subject by outdoors magazines. In the February number of a middle west outdoor magazine the author tells of his two months' vacation in the White River country in Colorado. He had a good time and has told us in person that the Forest officers made life pleasant for him. What is better still he has this to say in his story, which is the first of a series:

"However, before bringing this story to a close, I want to pay tribute to that splendid body of men who are directly responsible for your comfort and well-being in the forests -- I refer to the Forest Rangers and their Supervisors.

I doubt if there were ever a more loyal, more self-sacrificing and more courteous and courageous body of men ever brought together under similar conditions. I say this with all due respect to the Royal Northwest Mounted Police of Canada and the Rurales of Mexico as they functioned under the stern hand of the elder Diaz. I am familiar with all three forces, have seen them all on duty and off duty, and all that has been said or written in praise of these three guardian bodies has been richly deserved.

Picture a cabin miles from habitation and in that cabin lives your ranger and Mrs. Ranger. He is a watchman of some hundred fifty thousand acres and makes periodical rounds of this domain. It takes a regular man to do that kind of work and a woman to back him up. Rain, snow, sunshine, wind -- it's all the same to a ranger. Today he is succoring a wounded hunter; tomorrow wrangling a bunch of stray horses or helping move a few thousand sheep or cattle; next day he clears a trail that the last storm toppled a few trees across. In between times he is watching out for violators of game laws and extending a helping hand to campers. And when he is all through for the day, or thinks he is, a fire in the timber breaks out because some fool threw a lighted cigarette on a carpet of pine needles, and all hell is to pay if the ranger isn't on the job.

Promise yourself and yours a vacation in one of the National Forests and make good that promise. You will come back a better citizen; you will have such shooting, fishing, motoring, riding as you never had before. You can make the trip cost you as little or as much as you please, but whatever it costs you'll get your money's worth."

Dean Baker Leaves Syracuse

Hugh Potter Baker, at one time in the Forest Service where he busied himself with nursery and planting operations in Nebraska and Colorado, but most recently dean of the New York State College of Forestry at Syracuse, has resigned his deanship and has become secretary-treasurer of the American Paper and Pulp Association with headquarters at New York. This new job makes Professor Baker an executive officer of the parent association of America's great paper industry. A salary of $10,000 is to go with the new job, the one Professor Baker has just given up paid him $6,000. In offering the position to him the Association had the following to say:

"The members of this association have come to realize the importance and necessity of broadening the work of the association by studying the problems that affect the industry nationally, including, of course, among others, the vital question of the future raw material supply for this great industry on which the business and social life of the nation depend for an indispensable article. I believe there is a great work to do through the association, and a fine opportunity for genuine public service in making it effective in its own field."

The Hardwood Lumber Market

A decrease of 31 per cent in stocks on hand for the principal eastern and southern hardwoods occurred in the period January 1, 1919, to November 1, 1919. Stocks on hand January 1, 1919, were only 70 per cent reduced. Accordingly present stocks on hand are not more than 48 per cent normal. The greatest decreases were in white and red oaks, the most important hardwoods. The smallest decrease was in chestnut and poplar.

The prices behaved differently. They increased at a rapid pace. Eastern hardwoods increased 32.3 per cent for basswood and 132 per cent for quartered oak. The average for white oak, basswood, chestnut, and poplars was 82 per cent. Southern hardwoods ranged from 59 per cent for cottonwood to 217 per cent for quartered red gum and averaged 136 per cent for oak, gum, ash, and cottonwood. The entire rise in prices did not come until after May. There was a slight reaction in August and September and the most phenomenal rises occurred in November and December.

Beginning with the new year, hardwood stocks are less than 50 per cent normal and prices far above anything ever experienced in the lumber industry. Prices are still mounting. A lull in demand for a considerable period is the only thing to bring down prices, provided there is also greatly increased production.

S. L. WOLFE.

Resolutions on Ranger Stations

The following resolutions were adopted by the Forest Service women (Forest Rangers' wives) in attendance at the Forest Rangers' meeting held on the Coronado Forest, Arizona, last December:

Because of isolated location of the great majority of all ranger stations; because of the general limitation of social opportunities, because of primitive living conditions prevailing and coupled with the necessity for protracted periods of absence on official work of the Forest Rangers from their homes; because of the general location of stations in the higher altitudes where severe weather conditions prevail; because of the recognized limitations in financial return in the way of salary which we keenly realize, but nevertheless do not let interfere with our loyalty or the loyalty of our husbands to the Service; because of these and many other less important factors, we, the women of the Forest Service in attendance at this meeting, strongly recommend that the superior officers of the Service continue their efforts to improve the housing, living and sanitary conditions at Ranger Stations; that we feel it is a bitter injustice on the part of Congress to continue the entirely inadequate $800 limitation on Forest Service buildings, which has in the past and will continue to prevent furnishing any and all sanitary conveniences, even of the most primitive nature or even structures fit to live in and provide for a growing American family; that under present economic conditions a raise of this limitation to provide decent quarters in isolated places will, we believe, offset the many harassing personnel problems of the Service.

Supervisors' Meeting in California

The Forest Supervisors' Meeting of District 5 will be held in San Francisco on February 2 to 5, inclusive. The major purpose of the meeting will be to provide for a re-statement of the policies of the different activities that may not be altogether clear to the field force. The District Forester will preside and the subjects will be presented by the Assistant District Foresters concerned, to be followed by discussion by the Supervisors.

Supervisors' Meeting in Denver

The Forest Supervisors' Meeting for District 2 will be held in Denver on February 24 to 28, inclusive. A flexible program has been provided. The subjects to be considered will be presented by those specially designated and after the presentation it is expected that there will be a general discussion by all present.

Forest Service Engineers will hold Conference

A conference of the engineers of the Forest Service will be held on February 9 to 14, inclusive, at Denver, Colorado. A busy time is provided for those in attendance. The conference will be opened by Chief Engineer O. C. Merrill, who will speak on "Scope, Purpose, and Development of Branch of

Forest Service Engineers will hold Conference (Continued)

Engineering." The remainder of the opening morning session will be given to the discussion of general administrative matters and the succeeding sessions will be devoted to the principal activities of the Branch of Engineering. The following subjects will be discussed: Water Power, Maps and Surveys, and Roads. The most time will be devoted to the subject of Roads, for which two and one-half days have been allotted on the program. The conference will wind up with a joint session with the engineers from the Bureau of Public Roads. The district foresters, district engineers, and representatives from the Washington office will be in attendance.

Fire Prevention Rules for Railroads

Special rules for the prevention of fires along railroad rights-of-way have been sent to the Regional Directors, by the U. S. Railroad Administration with the request that the rules be put into effect. The recommended rules have the approval of the Executive Committee of the American Railroad Association and are based on rules suggested by the various State Forestry Departments and the Forest Service.

The American Railroad Association is an organization of long-time standing composed of the various railroad corporations and its function is to co-ordinate and standardize the work of the roads.

The committee in reporting comments seriatim on the rules as originally submitted. The final rules are in the imperative mode. Of particular interest is the general comment:

"Experience demonstrates that damage by forest fires is practically preventable. Measures for the protection against this loss have been adopted by the United States Government in handling its forest fires; by certain States under the Forestry Departments; by railroads whose lines pass through valuable timber lands, and by large corporations with valuable timber holdings. The Federal Government co-operates with many States in the protection of forests from fire loss on the watersheds of navigable streams. The combined efforts of these different organizations have resulted in a very large reduction of the annual fire loss. The measures adopted have, in the main, consisted of the establishment of patrol systems for the discovery of fires, and fire-fighting organizations for dealing with fire when reported. As numerous forest fires originate on or near the rights-of-way of railroads, it has been natural for railroads to combine with the State and other organizations in providing protective measures for the work. In certain States this obligation has been placed entirely upon the railroad by State laws and regulations.

Legislation relating to fire protection as affecting railroads is generally along the lines of requirement for locomotive spark arresters; for devices for preventing the escape of fire from ashpans and fireboxes; the prohibition of depositing fire, live coals, etc., on tracks or right-of-way; the requirement of screening smoking car windows; cleaning the right-of-way; extension of cleaning the right-of-way at dangerous points to strips beyond the right-of-way; maintenance of fire patrolmen to follow trains in forest districts during the danger seasons, and notification by trainmen of fires observed in passing, etc.

In certain States, notably Michigan, the timber land owners have organized themselves into protective associations and raised the funds necessary to maintain organizations of fire wardens and forest rangers, and have co-operated with the State authorities in this matter. Railroads likewise in the timber districts have organized systems of patrol and special fire-fighting equipment."

The recommended rules are as follows:

"Precautionary Measures.

1. Railroads shall not permit fires, burning waste, live coals, ashes, wood or other substances in a burning state to be deposited on tracks or right-of-way, unless such fires are completely extinguished immediately thereafter; except where such fires are deposited in pits provided for that purpose, or deposited on parts of track specially designated as being safe for such purpose.

2. Railroads shall take the necessary measures to maintain tracks and right-of-way in safe condition to prevent the spread of forest, prairie and field fires.

Prevention measures shall be taken in all cases where coal- or wood-burning locomotives are operated through districts where there is possibility of fire running. In general, such measures shall be as follows:

Disposal of Inflammable Material.

(a) All inflammable material, such as standing dead trees, logs, dead or decayed wood, brush, dry leaves and dry grass, within the limits of the right-of-way, shall be burned off early in the spring months, and as often thereafter as may be deemed necessary.

Supervision of Burning Operations.

3. No railroad, through its agents, employees, or contracters, shall burn, or cause to be burned, any cross- or switch-ties, mowings, debris, or other litter on or near the right-of-way except under proper supervision, to prevent such fires from spreading beyond control. During the period of greatest fire danger, no such burning shall be done by the railroad forces.

Reporting Fires.

4. Railroads shall instruct and require stationmen and other employees, agents, or contractors, to report fires and extinguish same when on or adjacent to the right-of-way, as follows:

(a) Enginemen, conductors, or trainmen, who discover or receive notice of a fire burning upon or adjacent to the right-of-way, or of a fire which threatens land or property located adjacent to the right-of-way, shall report its existence and exact location by milepost to the agent or person in charge at the nearest point where communication by telegraph or telephone is available, and also notify the first section employees passed.
Notice of such fire shall also be given immediately by enginemen by a system of warning whistles.

(b) The agent or other employee of the railroad shall at once notify the nearest section employees, and, if possible, the nearest Federal or State Forest Fire official, of the existence and exact location by milepost of such fire.

(c) When a fire is reported or discovered burning adjacent to the right-of-way of a railroad, regardless of its origin, such sectionmen or other employees of the railroad as are available shall at once proceed to the location of the fire and extinguish it, provided such sectionmen or other employees at the time are not engaged in work essential to the safe operation of trains.

(d) Railroads operating through forest districts shall provide suitable blank forms for reporting fires occurring on or adjacent to the railroad right-of-way, regardless of their origin. Section foremen shall be instructed and required to make detailed written report on the prescribed form of any fire, however trivial, and to forward such reports promptly to their superior. The intent of this rule is to determine and, if possible, to eliminate the causes of fire.

Special Instructions.

5. Railroads shall issue special instructions to employees concerning the foregoing rules or regulations. Such rules or regulations shall be posted on bulletin boards at round houses, section houses, stations, and in conspicuous places on other parts of the right-of-way of the railroad.

Co-operation with Other Agencies.

6. In view of the aid that may be rendered by the various State Forest Fire Protective organizations, the officers of the Forest Service of the United States Department of Agriculture, and Timber Owners' Protective organizations, the closest possible co-operation by railroads with such agencies, wherever they exist, is desired and encouraged. The details of such co-operation between the railroad forces and the protective organizations is to be arrived at by mutual agreement between the parties concerned.

Minimum Requirements.

7. The foregoing rules or regulations constitute minimum requirements. It is not intended that they shall supersede state laws or regulations where additional measures are in effect, but they are supplementary thereto."

Board of Surveys and Maps

The President, on December 30, issued the following:

"In order to coordinate the activities of the various map-making agencies of the Executive Departments of the Government, to standardize results, and to avoid unnecessary duplication of work, I hereby constitute a Board of Surveys and Maps, to be composed of one representative of each of the following organizations:

1. Corps of Engineers, U. S. Army.
2. U. S. Coast and Geodetic Survey, Department of Commerce.
3. U. S. Geological Survey, Department of Interior.
4. U. S. General Land Office, Department of Interior.
5. Topography Branch, Post Office Department.
6. Bureau of Soils, Department of Agriculture.
7. U. S. Reclamation Service, Department of Interior.
8. Bureau of Public Roads, Department of Agriculture.
9. Bureau of Indian Affairs, Department of Interior.
10. Mississippi River Commission, War Department.
11. U. S. Lake Survey, War Department.
12. International (Canadian) Boundary Commission, Department of State.
13. Forest Service, Department of Agriculture.
14. U. S. Hydrographic Office.

The individual members of this Board shall be appointed by the chiefs of the various organizations named and shall serve without additional compensation.

The Board is directed to make recommendations to the several Departments or to the President for the purpose of coordinating all map-making and surveying activities of the Government and to settle all questions at issue between Executive Departments relating to surveys and maps in so far as their decisions do not conflict with existing laws.

This Board shall perfect a permanent organization and shall hold meetings at stated intervals, to which representatives of the map-using public shall be invited for the purpose of conference and advice.

This Board shall establish a central information office in the U. S. Geological Survey for the purpose of collecting, classifying and furnishing to the public information concerning all map and survey data available in the several Government Departments and from other sources.

All Government Departments will make full use of the above Board as an advisory body and will furnish all available information and data called for by the board.

So much of the Executive Order of August 10, 1906, as grants additional advisory powers to the United States Geographic Board is hereby rescinded and these additional powers are transferred to the Board of Surveys and Maps."

The Board has been organized and is now ready to function. O. C. Merrill, Chief Engineer of the Forest Service, was elected chairman of the Board. A committee is now engaged in drawing up a set of by-laws and rules of procedure.

The Grazing Examiner

Assistant District Forester Kavanagh contributed the following to 6-26, the Monthly Bulletin for District 6. The subject is of interest and importance to the entire Service and is therefore reproduced in full:

HAS THE GRAZING EXAMINER A FUTURE TO LOOK FORWARD TO?

The future of the "Pastoral Technician," or officially, the Grazing Examiner, is a subject upon which much serious thought is being given at the present time. The demand for grazing examiners in this district alone is becoming a serious one, and there does not appear to be any difference as regards conditions elsewhere. No less than eight supervisors, including two on the West side, have urgently recommended the appointment or assignment of grazing examiners

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to their forests. Considering that we now have three men doing work on two forests each, it is apparent that practically all the grazing forests now feel the need of trained men to handle the grazing work.

Of the original grazing assistant or grazing examiner personnel, a majority have left the Service for more lucrative employment either with stock outfits or with educational institutions. Of those left, who have had an opportunity to get out and display their ability, scarcely one but has had offers that they have reluctantly turned down.

Educational institutions all through the West are adding to their curriculum courses designed to equip the student to manage stock ranches or farms. Many of these courses are quite extensive, covering a wide range of subjects and including besides Animal Husbandry, and the customary agriculture studies, more detailed studies in plant physiology, agronomy and other allied sciences, which are adaptable in range management.

The stockmen who in years past had little time to "waste" on "White Collar" and "High Brow" dope are now keenly alive to its value and importance. For example, Mr. Jardine's Bulletin on Range Management has been carefully read and studied by thousands of our western stockmen and many of them are attempting to profit by the information and advice given in that and other Departmental publications.

Hundreds of thousands of dollars are being spent in securing better breeding animals to head the herds of sheep and cattle in the West. Here in Oregon and Washington the value of the live stock owned is in excess of ninety millions of dollars without considering the value of the ranches, farms, equipment, etc., that are necessary now to successfully carry on the business.

Owners of timber and other lands upon which it is possible and practicable to graze stock are securing excellent rentals for such use. In many instances these rentals pay a good income as an investment after deducting taxes and carrying charges. These people in particular are displaying as keen interest in range management and control, as is witnessed by the adoption by many of them of Forest Service requirements in connection with the granting of leases. Frequently clauses are found in their contracts that correspond word for word with clauses in certain Forest Service papers.

The United Stockmen's Association, comprising both sheep and cattle owners, at its meeting in Salt Lake City on July 21, advocated placing all the remaining Public Domain under the Department of Agriculture, in order that the present destructive practices might be stopped and the productivity of the range increased. This was as direct an acknowledgement of the validity and practicability of range management as practiced by the Forest Service and other cooperating agencies as could be desired.

The Live Stock shows held this past fall in Spokane and Portland, brought to the attention of many who were not familiar with the extent and importance of the live stock interests of the Northwest, the fact that here was an industry that represented millions of dollars in capital; that furnished a livelihood for many thousands of families, and that was the backbone of many communities and the source of much wealth throughout the West.

Stock-paper is held in nearly every bank in the Northwest, and is regarded highly as a security, especially when the borrower has good feeding possibilities for the stock.

There unquestionably is a future in the Grazing Examiner work. In the Service, funds are not available to extend the work as fast as we would wish, but with the urgent demand that is being made upon us by the stockmen, it will only be a matter of time until that deficiency is remedied. Outside the field is just opening up. It perhaps will never be very extensive, but for the next few years there are excellent possibilities. In the stock business as in other industries there is room for the man who can mix practical and technical knowledge into a useable whole and with it extract from the business, without impairing the capital stock, a greater continuous return on the capital involved.

Western Trip by Massachusetts Forestry Association

Plans are under way for the members of the Massachusetts Forestry Association to make another western trip this summer. This will be the third trip and aims to give the members a chance to visit some of the National Parks and National Forests. The first party consisted of thirty members and the second of 75 members. Prospects are that a much larger number will make the trip this summer. Full details as to length of time and itinerary have not yet been made.

Forestry Problems in Queensland

Forestry problems are world wide and appreciation of the seriousness in the situation is being realized more and more. The Australian Forestry Journal in a recent issue contained the following:

"Whereas among reasons given by the timber getters for the prevailing high prices of timber are (1) a growing scarcity of marketable trees, and (2) increased demand for timber for export.

"The convention views with alarm the prospect of the depletion of Australia's indigenous forests, and urges upon the Governments the necessity of an accurate survey of our timber resources with a view to taking steps to conserve the same, and also augment future supplies by a well-considered scheme of re-afforestation."

In commenting upon this resolution, Mr. Coyne remarked that he shared the alarm of the convention at the prospect of the depletion of the indigenous forests. The present Government had fallen heir to a very serious forestry problem. Less than one per cent of the State had been set aside for State timber farming. The original forest asset had been deliberately alienated, with the result that at present private holders supply nine-tenths of the hardwood requirements and two-thirds of the softwood needs of the timber trade of Queensland. Private holders thus dominated the position and the market, and it was these people who cried loudest for the revocation of the forest remnants on the plausible grounds that settlement was being delayed, and the timber supplies kept short and at high prices. To continue the wicked policy of the past meant handing over to the profiteer a monopoly of one of the richest assets of Queensland.

"This," added Mr. Coyne, "the present Government will not do, but it may follow the suit of other countries and redeem some of its lost forests by resumption or by repurchase. Moreover, at the risk of being charged with extravagance, it will reinvest in the forests something at least of the revenues that have been derived from the forests. Had the earnings of the Forest Service been applied to their legitimate purpose in the past, we should not have arrived at the sorry stage of today. The forest reserves, instead of being monuments of stagnation and a reproach to thriving districts, would have been carrying a contented forest population engaged in all the tasks from harvesting and marketing the original crops to sowing and growing the next. Had this been done, we should not today have had to face the constant and aggressive demands by local progress associations for a division of the timber loot of their districts.

"Late though it be in the day," concluded Mr. Coyne, "the present Government is determined to grapple with the important issues at stake. One by one the forest reservations are being organized under resident overseers and laborers. On the important Brooloo State Forest, for instance, over thirty returned soldiers are now employed in all phases of forestry activity. Timber farming is fast becoming a recognized agricultural pursuit, and the districts which are fortunate enough to possess State forests within their borders will find in the end that they have good cause for self-congratulation."

The Cork Industry

The total world corkwood production is placed at 396,832,000 pounds, of which 45 per cent is produced in Portugal, 30 per cent in Spain, 5 per cent in France and Italy, and 20 per cent in Algeria and Tunis.

The greater part of the corkwood is used in manufacturing cork stoppers and cork disks. Cork waste is employed in making linoleum, for which purpose virgin corkwood is used.

A number of years ago experimental plantings of cork oak were made in California, Florida, and South Carolina. The plantation at Summerville, South Carolina, made in cooperation with the South Carolina Experiment Station, was a complete failure. The experiment on the Florida Forest was, according to latest statistics, fairly successful. Some of the trees had reached a height of 10 feet and were reported to be in a thrifty condition. No information of the California plantation is available.

Douglas Fir Flag Pole

The Victory Flagstaff -- the second highest in the world --has been erected on the summit of Victory Mount, near the Victoria Gate at Kew Gardens, London, England.

Douglas Fir Flag Pole (Continued)

The Flagstaff is a magnificent and unique specimen of Douglas fir presented by the Government of British Columbia to replace the old flagstaff received from British Columbia in 1861, and which occupied the same commanding site until recently when it was removed as it had fallen into decay.

The dimensions of the Victory flagstaff are: height, 215 ft., width at base, 2 ft. 9 in., and diameter at summit, 1 ft. The tree, felled in 1914, was 220 ft. in height, 6 ft. in diameter at the base, and 18 in. inside the bark at the top. It was hewed into an octagonal staff, rounded and gracefully tapered toward the top. It was landed at the Victoria Dock December 29, 1915, and then towed up the Thames to Kew.

The staff will be surmounted by a huge copper cap, to which will be attached the halyards.

Washington Notes

Col. Graves is on route to New Orleans, Louisiana, to attent the Second Southern Forestry Congress, which is scheduled for January 28 to 30, inclusive.

R. Y. Stuart has left Washington and expects to be absent about six weeks. He will put in most of his time attending the supervisors' meetings at San Francisco, Albuquerque, and Denver.

Will C. Barnes is in Spokane to attend the meeting of the American National Livestock Association and incidentally speak to them on Stock Grazing on the National Forests.

District Forester A. S. Peck paid us a brief visit last week. Mr. Peck is gathering together his lares and penates preparatory to his move to Denver to assume his new duties.

W. I. Hutchinson, in charge of information and exhibit work at Denver, is in Washington on detail getting an idea how the other half works.

John T. Harris, a member of the Forest Service for many years in the Washington office and assigned to Forest Products, has resigned and is the leading spirit in a real estate firm in the city. Housing conditions in Washington are still critical, but there is hope ahead for us with Mr. Harris in the real estate game, for his many friends in the Forest Service now know where to go for help.

Edward P. Ancona from the district office at Albuquerque dropped in at the Atlantic Building for a short visit during the holidays. Mr. Ancona was at once impressed into service and sat in on the first run of the motion pictures taken in Santa Fe and surrounding country by Mr. Goergens last summer.

District 3 - Southwestern District

Arizona's contribution to the Washington National Monument in Washington, D. C., is to be a stone cut from a log of petrified wood from the chalcedony forest near Holbrook, Arizona. Each State in the Union is represented by a memorial stone in the interior of the shaft. These blocks are six inches thick, two feet wide, and four feet long. The selection of the memorial stone was made by the Board of Directors of State Institutions. It will be sent to Los Angeles for polishing and cutting.

The memorial stones are placed in position without expense to the States. South and North Dakota are represented by a single stone for Dakota Territory, but indications are that before long South Dakota and North Dakota will each have its own memorial stone in place.

The memorial stones vary in their inscription. Some carry the State coat of arms, or other insignia while others some quotation from a prominent citizen of the State.

The question of placing the name of the National Forest on every sign will be up for discussion at the Supervisors' Meeting. District 5 is doing this at present.

The Coronado submits as a new idea the use of galvanized iron culvert pipe for well curbing and raises the question whether this has been done on any other Forest and what is the comparative expense.

Arizona and New Mexico have been included in a new federal highway district to be known as No. 13! E. S. Wheeler, highway engineer, will be in charge. He estimates that during the present year road construction under his supervision will aggregate more than $6,500,000.

District 3 - Southwestern District (Continued)

Paul P. Pitchlynn, who left his job of Supervisor of the Coronado Forest for a detail to District 5, has left District 3 for keeps. The permanent transfer of Mr. Pitchlynn has been approved and he will continue in the Office of Operation at San Francisco. As a member of the Forest Service in District Three Mr. Pitchlynn has had an active part. He started in as Forest Guard on the Tonto in 1908 and after having all the various descriptive ranger titles -- assistant, deputy, and full-fledged ranger, he went to the Gila in 1912 as deputy forest supervisor, and then later to Albuquerque in Operation. After two years of city life Mr. Pitchlynn was appointed Supervisor of the Sitgreaves, then on the Coronado Forest where he was at the time of his temporary, now permanent, transfer to District 5.

At the recent session of the Investigative Committee consideration was given to a number of subjects vital to the District

One of those is the question of western yellow pine reproduction. After about eleven years' study, Mr. Pearson takes a far more hopeful view of the reproduction problem than most foresters have taken in the past. Sample plots on cut-over areas, observed for a good many years, show that young growth gradually filters in; and Mr. Pearson believes that on the average forest site there will be a satisfactory stand of reproduction twenty years after cutting, representing a good many age-classes.

1918 produced a bumper yellow pine seed crop. 1919 produced a bumper snow and rainfall. As a result, yellow pine seedlings sprang up all over the pine type in this District six weeks to two months earlier than usual, made an unprecedented root-growth (eleven to seventeen inches against three to six inches), and came up in staggering numbers. Many counts show from 10,000 to 400,000 seedlings to the acre. The estimated average is 40,000. If two-thirds of the pine area of the Southwest has produced seddlings at this rate, it means that there are scores of billions of these small trees. If the 1919 crop of seedlings can be protected from fire and sheep, there will be no local lumber shortage in the twenty-second century A. D.

The brush-disposal study initiated three years ago and suspended during the war will be resumed by Messrs. Krauch and Westveld. Likewise, the sheep-damage investigation, which revealed considerable areas on the Coconino and Tusayan on which the reproduction was badly injured or destroyed by sheep, will be continued, the work being mainly confined to spotting those areas on which damage warrants special treatment of the sheep problem.

Special forest products and by-products came in for discussion. A turpentine management plan will be worked out for the District in anticipation of a demand for naval stores in the Southwest with the decline of that industry in the southern pineries. Studies have already been made of southwestern pine as a source of turpentine. They show that this pine produces turpentine at about sixty-four per cent of the rate of southern pine.

Rex King will make a special study of the possibilities of growing English walnuts on the native walnut by grafting. Successful methods of grafting have already been worked out. The question is chiefly at what altitude the nuts can be grown, and how our uses policy can be shaped to provide for this industry. Mr. King will also look into the pinon nut industry.

A more intensive plan of management for the woodland type will be worked out, and studies will be initiated this year for that purpose. In grazing, Mr. Talbot will conduct three major studies - the salting problem, water development, and the carrying capacity of brush ranges. Many other questions are slated for study by grazing, but funds and personnel do not permit tackling them this year

Fire studies initiated two years ago will be continued and enlarged.

The erosion of canyon beds, particularly as it affects farm lands and Forest Service administrative sites, was recognized by the Investigative Committee as an insiduous evil doing an enormous amount of damage. One of the most conspicuous instances is on the Blue River where bottom lands of great value for agricultural and grazing ranches have been destroyed. The chief cause was probably the destruction, by over-grazing, salt grounds, and clearing, of the brush cover of the Canyon, which is chiefly willow. On Tonto Creek fine alluvial bottoms have been replaced by gravel beds through the cutting of the cottonwood trees in the great drouth of 1904, so that the browse could be eaten by cattle. Lower Cherry Creek on the same Forest was, twenty years ago, a succession of productive farms. Today it is absolute waste of boulders.

Lower Tusas Creek on the Carson is an example of the opposite kind. Here there has been farming for generations, and also goat grazing, but the stream banks are fringed with a good growth of willow, and there has been practically no erosion.

The Forest Service has here an opportunity, not only to protect its administrative sites from erosion, but to give a good example to local settlers. The planting of willow cuttings along stream beds within administrative sites is urged, and field men can do a lot of good by pointing out to farmers the value of maintaining a fringe of brush and timber along streambeds. Moreover, arroyos can frequently be entirely filled up by the construction of small log and rock dams which catch the silt. This has been demonstrated by a farmer at Alpine, Arizona, who is now cultivating what was once a deep arroyo, and is gradually filling up another by the use of these dams.

Small precautions of this kind may be the means of saving administrative sites, which, if placed on the market, would be worth thousands of dollars as farms or ranch headquarters, and are necessary to efficient administration in the future.

The research men have also been asked to find, if possible, some bush that grows from cuttings like willow, but which is not so liable to be destroyed by stock. Such a plant could be used to protect stream banks on unfenced land subject to heavy grazing.

District 4 - Intermountain District

"Forestry in its Relation to Economic Growth and Development" was the subject of a talk made by Mr. Scott on the occasion of a visit at the District headquarters by members of the Senior and Junior classes in economics of the Ogden High School.

The Boise Basin Fish and Game Protective Association has been organized by residents of Idaho City and vicinity. The association proposes to cooperate with Supervisor Grandjean in the protection and development of the fish and game resources of that region.

Supervisor Roak of the Kaibab Forest reports that a number of deer have been observed which indicated an infection of the eyes analogous to "pink eye" in cattle.

Aspen covers vast stretches of the mountains in the National Forests in Utah. These stands occur at the medium elevations and are for the most part of low quality and in all probability replacement by more valuable conifers will be possible.

Meanwhile it is necessary to get the best out of the present aspen stands and investigations have been under way for some time. The problem is how to cut over aspen stands to secure a heavy reproduction of vigorous sprouts and to determine whether the dense stands of saplings can be thinned out so that those left will develop into good useful trees. It has been determined that clean cutting is the ideal system for aspen. Sprouts develop rapidly and straight only where there is plenty of light.

Heavy grazing, especially by sheep, must be prevented during this period or the new stand will be destroyed by browsing. Extensive improvement by thinning is possible only with a young and vigorous stand of aspen.

District 5 - California District

M. R. Tillotson, Forest Supervisor on the Cleveland Forest, has resigned and is now a private citizen, but attached to one of the big corporations in California. Mr. Tillotson entered the Forest Service as land examiner in 1908 with the official title of expert. This he changed for assistant forest ranger, after taking the examination. After an interlude from active field work as chief of maintenance he went to Shasta as deputy supervisor. This assignment lasted several years and then he began a series of jumps as deputy on the Lassen, the Stanislaus next, and then the Cleveland. He was made Supervisor of the Cleveland in 1918, which position he has now resigned.

District 6 - North Pacific District

Fir, spruce, and hemlock sent from Oregon and Washington forests to the Laboratory at Madison are back here again in the form of silk, paper, and flour. The woven silk, soft and rich and colored blue, is shown in a width; also in a skein and in a pair of socks. The paper appears as bagging, absorbent (to be substituted for cotton or sphagnum moss), webbing, cloth, fir rod and fir tube, rug yarn, lathes, basket braid, glue tissue, furniture reed braid, basket braid, wrapping twine, binder twine (with sisal core), and rope. The flour (finely divided wood) expresses itself in a phonograph record (containing 60 to 80 per cent wood flour); with linseed oil, in linoleum; and in gunpowder and dynamite. These samples are effectively arranged, under glass and inclosed by a neat frame of wood, on matting itself an article of the exhibit, being finely woven from wood pulp fiber and attractively colored and patterned. Thus empaneled, they have been displayed in the window of a large department store, where much interest has centered in them. Nearly all of these articles were produced from what but for their manufacture would have been waste material, and it is to check waste and interest capital in utilization of wood products in the unfamiliar ways it demonstrates that the exhibit has been sent throughout the country from the Madison Laboratory. L. A. Nelson, local secretary of the West Coast Lumbermen's Association and formerly of the Forest Service, had this exhibit brought to Portland. It goes next to Astoria and has been displayed in the Sound cities.

Logging operations in the vicinity of the proposed Carbon River Highway, which is to lead through the northwest corner of Rainier Forest into Rainier Park, are causing concern for the safety of fir, cedar, hemlock, and spruce which should be preserved to line the future highway. Herbert Evison, secretary of the Natural Parks Association of Washington, in a letter to the "Spokesman Review," of Spokane, takes this cutting along Carbon River as an illustration of the necessity of a system of exchange by which roadside strips at present privately owned can be brought under protection of the Forest Service. "The Natural Parks Association of Washington, whose prime purpose is to work for the preservation of such natural beauties, is preparing, in conference with the timber owners, the Forest Service, and other interested parties, a bill to permit such trades from any National Forest in Washington," writes Mr. Evison. The Tacoma Lumber Company now logging along Carbon River owns 100 of the 500 acres of magnificent timber on land which will be traversed by the highway. The company desires to have preserved the scenic beauty of this strip which will eventually border a roadside, and asserts that it will operate elsewhere as long as possible, pending the legislation by which it may be given timber elsewhere on the Rainier for it.

Gladys Hardy Murray, stationed on Columbia Lookout, Colville Forest, during the 1919 fire season, has a letter in the January issue of the "National Sportsman," in which she urges the necessity of eliminating the human factor as a cause of fires. "The game is disappearing rapidly enough from hunting without the additional factor of having refuges destroyed by fire," she writes. Though the main subject of her letter is prevention of forest fires, she touches also upon hunting and fishing to be enjoyed on the Colville and gives an insight into her life at Columbia Lookout Station.

The Portland Section, Society of American Foresters, was recently addressed by F. E. Ames and E. W. Kramer. Mr. Ames told of the work of his battalion in the Twentieth Engineers, in logging and milling timber in French forests. The mill, with a rated daily capacity of 5,000 feet, cut 52,000 feet of ties in one day. Mr. Kramer, hydraulic engineer from the Missoula office, spoke most interestingly of waterpower development on the upper Missouri and its tributaries, illustrating his talk with lantern slides.

To find the cabin in which they had expected to get food and warmth doorless, almost windowless and roofless, and with snow so piled in its corners as to make it worse than no shelter, was the recent experience of winter visitors to Larch Mountain summit. Evidently, the material had been torn away for firewood, although wood for burning could have been picked up easily enough. This shelter belongs to the Trails Club. An official of the Club expresses the opinion that if after its repair it could be turned over the Forest Service, Government-ownership signs would protect it from further serious vandalism. Larch Mountain is at the northwest corner of the Oregon Forest, reached by a trail beginning at Multnomah Falls. It is climbed partly for the sake of the magnificent view of St. Helens, Rainier, Mount Adams, and Mount Hood to be had from its top.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

February 2, 1920.

Changes in the Cabinet

President Wilson on January 27 nominated David Franklin Houston, who has been Secretary of Agriculture since March 6, 1913, the beginning of the present administration, for Secretary of the Treasury. At the same time Edwin T. Meredith was nominated as successor to Mr. Houston as Secretary of the Department of Agriculture.

Mr. Meredith hails from Iowa, is a practical farmer, and business man. He is editor of Successful Farming, president of the Associated Advertising Clubs of the World, a director of the Chicago Federal Reserve Bank, and was one of the excess profits advisors of the Treasury Department. Mr. Meredith will assume the duties of his new position at once.

Manufacture of Pulp and Paper in Canada

The Canadian policy of benefiting by the home manufacture of her natural resources is shown in the pulp and paper industry. In 1908 only 36 per cent of Canada's pulpwood cut was manufactured in the Dominion and 64 per cent exported raw. In 1917 over 70 per cent was manufactured in Canada and less than 30 per cent exported in a raw state.

Ten years ago, the number of employes in the pulp and paper industry was about 9,000, and at present it is estimated at 25,000, with an annual wage bill of $20,000,000. The exports for the last year were about $100,000,000. About 90 per cent of the newsprint manufactured in Canada is exported. More than one-third of the newsprint used in the United States is of Canadian manufacture.

In giving the above statistics, Clyde Leavitt goes on to say:

"The importance of all this in the maintenance and development of the economic structure of Canada can scarcely be over-emphasized. Obviously, it would be the poorest kind of public policy for the respective provincial governments to relax the existing embargoes upon the export of raw pulpwood cut from Crown lands. Such a course would inevitably mean reducing the supplies of raw material available for Canadian mills, as well as the more rapid depletion of our pulpwood forests, resulting in their comparative exhaustion within a measurable period of time. About 1,000,000 cords of pulpwood is now expected in a raw state, all cut from lands in private ownership. Practically all of this goes to the United States.

"The phenomenal growth and development of the pulp and paper industry in Canada serves strongly to emphasize the urgent need for the perpetuation of our great pulpwood forests, in order that this great industry may be permanent instead of merely transitory, as has proved to be the case in the greater portion of the eastern United States. There fire protection has been wholly inadequate and logging methods have been destructive, seeking, for the most part, the greatest immediate profit, without any conscious attempt so to regulate methods of logging as to leave the cut-over areas in a condition to produce another crop.

"Fortunately, in Canada, the great bulk of the forests are in public ownership, and the public, as a whole, can afford to take thought for the distant future. The increasing employment of trained foresters by Government services, as well as by pulp and paper companies, offers distinct encouragement for the future."

The Southern Pine Lumber Market

The developments in the lumber market during the past year would have made a fairly good John Bunyan tale a year ago, especially from the standpoint of prices. The following comparison of f. o. b. mill southern pine prices for a few grades picked at random, though representative, tell an interesting story:

The Southern Pine Lumber Market (Continued)

Grade and Items	Jan. 1919.	Jan.28, 1920.
"A" edge grain flooring 1" x 3"	$51.58	$153.00
"B" and better flat grain flooring 1" x 3"	36.00	104.60
#2 flat grain flooring 1" x 3"	24.90	54.45
"B" and better 5/8" ceiling	32.23	78.57
#2 - 5/8" ceiling	24.52	47.37
"B" and better dressed finish 1" x 6"	37.72	105.88
#1 boards 1" x 6"	30.85	82.97
#2 boards 1" x 6"	25.63	46.62
"B" and better casing and base	44.83	106.61
#1 dimension 2" x 4"s	25.00 average	43.00 average
#2 dimension 2" x 4"s	23.00 "	41.00 "

These figures do not tell the whole story. Between January and May, 1919, prices dropped off a few dollars. After May 15 they increased, at first slowly, then with great rapidity, and finally skyrocketed. In September and October prices remained practically stationary, though some items dropped slightly. During November and December there was another rapid rise and for the first 28 days of January the increase ranged from $5 to $6 for the lesser grades to $10 to $12 in the better grades.

Production during the year never exceeded 80% of pre-war normal. Stocks are far below safety and badly broken as to items. Some items are practically unobtainable at any price. Demand seems to be practically unlimited.

S. L. W.

A Busy Pen

Articles for publication prepared and approved by the Secretary during January are as follows:

Title	Author	Publication
Hickory for Handles	R. K. Helphenstine, Jr.	The Handle Trade
A Theory on the Mechanism of the Protection of Wood by Preservatives	Ernest Bateman	Proceedings of the American Wood Preservers' Association
The Sawdust Trail over the Forest	L. C. Everard	Collier's
Suitability of Various Wood for Use in Heavy Wagons	David G. White	Southern Lumberman
Private Forestry and Legislative Principles	O. M. Butler	Journal of Forestry
The Forest Products Laboratory and its Work in the Development of Shipping Containers.	J. A. Newlin	Packages

A Busy Pen (Continued)

Title	Author	Publication
Cooperation between Federal Government and States	J. Girvin Peters	Journal of Forestry
Modern Efficiency in Logging	Clinton G. Smith	P. B. Yates Machine Co. house organ.
High Temperatures and Eucalyptus	E. N. Munns	Journal of Forestry
The Recovery of Waste Roofing Felt	L. F. Hawley	Journal of Industrial and Engineering Chemistry
Camera Hunting on the National Forests	L. C. Everard	Lumber
Films from the National Forests	L. C. Everard	Educational Film Magazine.
A Chemical Investigation of Sound and Infected Ground Wood Pulp	S. A. Mahood and D. E. Cable	Paper Trade Journals
Report on Laboratory Experiments to Determine the Loss of Creosote by Evaporation from Open Tank Treatment	Ernest Bateman and G. G. Town	American Wood Preservers' Association
Timber Use and Timber Production	Wm. B. Greeley	House Organ of Henry Disston and Sons
Larch (Venice) Turpentine from Western Larch (Larix Occidentalis)	S. S. Mahood	Journal of Industrial & Engineering Chemistry
Burning Through our Biggest Hardwood Supply	E. H. Frothingham	Lumber Trade Journal.
How Range Depletion may be Recognized and Corrected	Arthur W. Sampson	National Wool Grower
The Application of Plant Succession to Range Management	Arthur W. Sampson	National Wool Grower
Tar Still Operation in Hardwood Distillation Plants	L. F. Hawley and H. N. Calderwood	Journal of Industrial and Engineering Chemistry
National Forest Municipal Camps	Arthur H. Carhart	American City
Colorado's New Recreation Association	Arthur H. Carhart	American City
Recreation: A Forest Utility	Arthur H. Carhart	Journal of Forestry

A Busy Pen (Continued)

Title	Author	Publication
Road Aesthetics	Arthur H. Carhart	Motor or American City
Jim Perry Meets His National Forest	Arthur H. Carhart	Farm & Fireside
The Light Burning of Western Pine Forests	Wm. B. Greeley	Magazine of National circulation

Canada's Exports of Pulp and Paper

Canadian exports of pulp and paper for October, 1919, were the largest for any month in the history of the industry, reaching a total valuation of $11,863,578, an increase of $3,533,021 as compared with the preceding month and of $5,301,634 as compared with the corresponding month of 1918, according to report of Consul F. S. S. Johnson at Kingston, Ontario. The October totals were made up of:

Articles	Month of October 1918	 1919
Paper and manufacture of........	$3,251,500	$5,954,916
Pulp:		
Chemically prepared........	2,914,255	3,965,946
Mechanically ground........	396,189	1,942,716
Total................	$6,561,944	$11,863,578

Newsprint paper formed the chief item of paper exports, amounting to 1,414,860 hundredweight, valued at $5,024,934, some of the largest importing countries being:

Countries of Destination	Newsprint Exports Hundredweight	 Value
United States....................	1,234,768	$4,375,185
United Kingdom....................	57,212	213,534
New Zealand......................	43,747	152,710
Australia.......................	56,482	194,933

The Argentine Republic, Brazil, Cuba, and Peru also figure as fairly important buyers of Canadian newsprint.

Native Timber in England

How to develop to the fullest extent the use and consumption of native timber and how to call attention to the valuable properties of English oak, beech, elm, and other hardwoods was discussed at a recent British Timber Conference held under the auspices of the English Forestry Association.

The presiding officer, Lord Selborne, stated that imported timbers had supplanted British timber without any adequate reason, and that many builders and even some architects had never considered the possibilities of these native timbers. He stated that no directed effort had been made to call these matters to*English timber merchants. Lord Selborne said further that the lumber trade in England is utterly disorganized and that a large proportion of the timber was in the hands of men who owned from 500 to 2,000 acres, and who were absolutely at the mercy of the local timber merchant when it came to selling the timber.

*the attention of

Transfer of Household Goods

Personal effects and property owned by Forest officers will hereafter be transferred at Government expense on a change of official station under orders without the operation of the limiting maximum of 5,000 pounds. This change is provided by a recent amendment of the fiscal regulations authorized by the Secretary of Agriculture.

The change is an important one and will go quite a ways to lessen the expense every Forest officer incurs whenever a change in official station is made. Recently there have been several instances in connection with the transfers where the Forest Service paid for 5,000 pounds at less than carload rates and the Forest officer did likewise on an additional 4,000 or 5,000 pounds. The property was sent as two shipments, whereas had the regulations permitted a single shipment at carload rates, the total cost would have been cut little in excess of the Government's share of the freight for the 5,000 pounds. The new regulation is better still because the Forest Service pays the total cost of moving the household effects. Even so, the Forest officer has many expenses incidental to his transfer through traveling expenses for members of his family.

To show what this new regulation means can be illustrated by citing just one instance. The Forest officer's total household goods weighed 9,600 pounds. At carload rates the charges would have been $197.20. Instead the Government paid for 5,000 pounds at L. C. L. rates $140.50 and the Forest officer paid for 4,600 pounds $132.67. In other words, a total of $273.17 was spent. Had in this instance the new regulation been in effect it would have cost the Government but $56.70 more and there would have been a saving for the Forest officer of $132.67.

An Interesting Resolution

Among the resolutions adopted by the National Woolgrowers' Association in its annual conference at Salt Lake City last week, we notice the following:

"Whereas, The sheep growing industry of the United States is dependent largely upon the proper and efficient administration of the grazing lands within the national forests; and

"Whereas, Men of high quality and with a knowledge of range conditions and requirements are necessary to properly administer the said grazing lands; and

"Whereas, The United States Forest Service has lost, and will continue to lose, their most valuable men on account of the inadequate salaries paid by the service; and

"Whereas, The loss of such men is a loss keenly felt by the stockgrowers; therefore, be it

"Resolved, That we urgently ask our representatives in Congress to secure the enactment of the necessary legislation to provide adequate compensation for the employees of the Forest Service; which will justify men now in the Forest Service remaining in their present positions and will encourage suitable men to enter the Forest Service in the future."

Washington Notes

Oscar M. Wold, fiscal agent at the Forest Products Laboratory, spent a week in Washington where he managed to find much business for himself and others in Research.

Otto Kress, in charge of the Pulp and Paper Section at Madison, was a visitor in Washington last week. While in Washington Dr. Kress had a conference with members of the Ordnance Department relative to the use of wood cellulose in the manufacture of ammunition.

Considerable excitement prevailed at the Atlantic Building during the past week. On entering the building the early arrivals had to pick their way over piles of lumber, ladders, and other building material. Hopes arose that the old and staid building was to be modernized. Alas, such is not to be the case! An additional room is to be created on the seventh floor by the simple expedient of erecting a partition in one of the large rooms. Meanwhile we continue to enjoy the luxury of the antiquated building, although exteriorly it has undergone a few changes. Some outside painting was done by placing an advertisement for automobile tires and accessories on the west wall, and the stores on the main floor were rehabilitated by the construction of the up-to-date shirt front display windows.

Washington Notes (Continued)

On entering the Atlantic Building we now each day run the gauntlet of attractive displays of clothing on one side and shoes on the other. These improvements are but skin deep, the members of the Forest Service still endure the sufferings as of old. During the protracted cold spell there were spots in the building that were almost comfortable, although in many rooms the mercury registered 58° and 60°, which is somewhat below the comfortable minimum allowed even in war days. But then, after all, our lot may be more comfortable than if we were in some of the paper macho' buildings erected for war purposes and now in many instances used for the regular department activities.

District 1 - Northern District

The local branch of the Bureau of Public Roads has been made a separate district in charge of District Engineer T. M. Keene, the present local representative. The new district will be known as District 11.

A two days' session of the district investigation committee was held at Missoula on January 15 and 16. Assistant District Forester Preston acted as chairman. In attendance were J. A. Larson, C. L. Billings, E. F. White, P. C. Kitchin, Glen Smith, Leon C. Hurtt, C. N. Whitney, James Girard, J. A. Fitzwater, L. C. Stockdale, and W. C. Lowdermilk, who acted as secretary. Evan W. Kelley, recently appointed Inspector in Operation, was present during the discussion of investigations of fires.

The meeting was the first since the reorganization of the investigative work in the Forest Service. The fundamental research work has been separated from the District administration and is centered in the Washington office. J. A. Larson becomes a member of the Washington office and so is responsible direct to the Chief of Investigations in Washington, but continues in charge of the Priest River Experiment Station. To maintain proper contact plans call for annual ddtails to Washington. Mr. Larson will start on his first detail under this new arrangement in the early part of February.

So that the results of research will be made available for use in the district W. C. Lowdermilk will be the liaison officer for the district.

The case of the United States vs. Elizabeth Davis was finally settled in November, 1919, by the payment to the United States of $3,984.73, which represented the value of fire-killed timber cut from the claim by the Milwaukee Lumber Company.

The Elizabeth Davis claim was initiated as a homestead in 1903. It covered 160 acres of some of the best white pine in North Idaho. It was located on Big Creek, St. Joe Forest. Unfortunately the forest fires of 1910 burned the timber on this claim along with the entire watershed of Big Creek. Following the fires, the Government timber on Big Creek was sold to the Milwaukee Lumber Company. Lands which were of unsettled status were sold under what is known as "Contract Bond," under which the purchaser guarantees to pay for the stumpage cut either to the Government or to the claimant, depending upon the final settlement of title.

The Elizabeth Davis claim went to final proof, and final certificate was issued subsequent to the cutting of the timber. Upon appeal, however, the claim was cancelled by the General Land Office about 1915. Following this the Forest Service failed to collect from the Milwaukee Lumber Company the value of the stumpage cut, brought suit for the value of the timber about 1917, and about March, 1919, Congress passed an omnibus bill, one item of which granted patent to Elizabeth Davis. Before the bill was passed, however, an amendment was inserted, providing that the passage of the act would not relieve the timber company from its liability to pay for the timber cut. The court held that the United States was entitled to receive the money for the timber cut. Finally the long history terminated, as stated at the beginning; Elizabeth Davis got the land, and the United States got the money for the timber, although the greatest value went up in smoke in the 1910 fire. The land is absolutely unfit for agriculture.

District 2 - Rocky Mountain District

A series of illustrated lectures will be given the teachers of the Denver schools by representatives of the District office on the policy and administration of the National Forests, including fire protection, grazing, game, planting, and improvements. The purpose of the lectures is to acquaint the teachers with Forest work so that they may in turn be prepared to take the work up with the children. The first lecture is to be given on January 29, and one lecture every two weeks thereafter until the subjects have been covered. It is expected to reach about 200 teachers by these lectures.

Forest Supervisor Hamel of the San Isabel Forest has completed a short detail to the District office where he worked out the plan for the recreational development of the San Isabel National Forest.

The associations have already placed orders for a great amount of the material to be used in the camp next year and are busy getting additional camp equipment. The San Isabel Public Recreation Association is reported to have placed an order for 100 canvas tents, 16 x 16 ft.

During the past season the citizens of Colorado Springs had a hard time to take care of their tourist population. They have become interested in the development of the San Isabel Forest and two of their representative business men were sent recently to a meeting of the San Isabel Public Recreation Association. It is now planned to adopt the general idea of taking care of the tourist visitors at Colorado Springs. A recent report indicates the probability of making $165,000 available for a camp of this type.

At a conference recently held in Denver the State Fish and Game Commissioner assured some of the Forest Service officials that he was heartily in favor of the recreation development of the San Isabel National Forest, and has promised to do all he can toward making this a model section of the State in game propagation and protection.

A memorandum of understanding has just been signed by the District Forester and the Director of Extension Service of the State of Nebraska providing for the assistance of County Agents in the distribution of trees from the Bessey Nursery to residents of the Kinkaid Enlarged Homestead District.

Under the law which provides for the distribution of trees, 5,080 people have received a total of 1,082,000 trees since 1912. No special fund has been provided for this work and it has cost the Forest Service annually from $1,000 to $2,000 to give trees to people in Nebraska. It has also been impossible for the Forest Service to make any inspection of the plantations so that the best results have not been secured from the tree planting.

There are County Agents in 11 of the 37 counties within the Kinkaid or Enlarged Homestead District of Nebraska. These Agents will receive applications for trees, render assistance to planters and make annual reports to the Supervisor on the results of their observations. It is planned to hold a conference of the County Agents at Halsey sometime before the opening of the next planting season.

District 3 - Southwestern District

H. G. Calkins, who during the past year has had charge of the new improvement program with respect to standard plans, ranger station construction, and five-year working plans, has been placed in charge of all improvement work in this District, with the exception of roads and trails.

The Lincoln Forest has put through an agreement which provides for cooperation in fire protection between Cadwallader and Harvey of El Paso and the Forest Service, which has been approved by the District Forester, whereby the cooperators will furnish sufficient funds to maintain a patrolman working under the supervision of the Forest Service. The Cadwallader and Harvey holdings aggregate 12,800 acres.

Seven different species are being cut and sawed into lumber on the Hallack and Howard Sale on the Carson Forest. These are western yellow pine, Douglas fir, white fir, corkbark fir, Engelmann spruce, blue spruce, and aspen. The firs and aspen are cut into box boards.

The University of Arizona is again cooperating with the Forest Service in arranging for a "livestock squad" next summer - a group of students to study the handling of stock on the range. Supervisor Wales and Forest Examiner Hill are assisting in arranging the course.

Another scheme for saving money through purchase of material from the War Department apparently has fallen through. Rusted barbed wire which has been painted is quoted at about $35.00 per ton f.o.b. New Cumberland, Pa. - or about one-half the cost of new galvanized wire at Pittsburg. Add the cost of freight to Arizona and New Mexico, compare the probable life of second-hand painted vs. new galvanized wire, consider the labor cost of replacement - the odds seem to be against the rusty wire.

At the request of this office, the Madison Laboratory has conducted careful experiments to determine the feasibility of staining hickory fire tool handles. The object in view was to reduce losses from fire tool boxes by staining the handles so deeply that the color could not be scratched off. The results of the experiments have shown that such staining is very difficult because deep penetration can not be obtained without special apparatus and without losses due to warping in re-seasoning the wood. The conclusion is that hickory handles can not be stained satisfactorily and the use of paint should be continued as heretofore. To have the letters "USFS" drop-forged in the steel would involve purchases in quantities greater than the Forest Service is in a position to make at present, and therefore the handles of all tools should be branded with the Forest Service branding iron "USFS" until we are in a position to devise some better method of identification.

Galvanized iron culvert pipe was used for curbing the well at the Ruidoso Ranger Station on the Lincoln Forest during the fiscal year 1918, and while the exact figures are not available, it is known that the cost was much lower than it would have been had regular well curbing been used. The well on which this pipe was used is reported by Ranger James as giving excellent satisfaction.

John Otterson, president of the Winchester Arms Company, was a recent visitor in the District office and, while talking to Messrs. Andrews and Leopold, had broached to him the question of enclosing in Winchester ammunition boxes printed matter carrying anti-forest fire and game conservation propaganda. Mr. Otterson seemed to be favorable to the idea.

Through the efforts of Ranger O. P. Schoenberg, a "bee" was held on December 2, and a new crossing made over Cave Creek on the Paradise-Rodeo Mail Road. The old crossing was destroyed by the flood just after Thanksgiving and no mail had been received for a week. Later in December Mr. Schoenberg assumed leadership in preparing a Christmas tree and program at the school house.

An effort is being made by local forest officers in cooperation with the Extension Service of the University, to organize a State Forestry Association in Arizona. At a preliminary meeting held in this office on January 8, Supervisor Wales was elected temporary chairman and Prof. Taylor of the Extension Service temporary secretary. A committee on organization was appointed and a program arranged for the organization meeting to be held at the University on Thursday afternoon, January 22, in connection with Farmers' Week. This program will include a number of addresses and discussions on various phases of the Forestry situation in Arizona.

District 4 - Intermountain District

District Forester Rneipp attended the Annual Meeting of the Nevada State Livestock Association last week. After considerable discussion the association went on record in favor of the King Bill, but urged the modification that all public homestead laws be applicable within the proposed grazing commons. The president of the association was absent so Vernon Metcalf, formerly a member of the District office at Ogden, but now secretary of the association, held down the job of presiding officer in addition to his regular duties. At the close of the meeting the Executive Committee raised Mr. Metcalf's salary to $300 per month.

Grazing Examiner Shoemaker is back in Ogden from attending a series of meetings of the stockmen on the Weiser Forest, held at Weiser, Indian Valley, and Council. The meeting scheduled for Cambridge was cancelled because of the influenza epidemic, on account of which public gatherings of all kinds have been prohibited.

District 4 - Intermountain District (Continued)

At the meetings held there was a good attendance and the stockmen present were much interested in National Forest grazing matters. The thirty members present at the Hitt Mountain Cattle and Horse Growers' Association voted unanimously to postpone the opening of the grazing season on their allotment from May 1 to May 15. The Indian Valley Cattle and Horse Growers' Association adopted resolutions requesting an intensive range reconnaissance of their allotment to determine whether the opening of the grazing season should be changed and whether the proper classes of stock were being grazed on the allotment at the present time...

Supervisor Charles DeMoisy, Jr., of the La Sal Forest, recently attended a meeting of the Paradox Cattle Association of Paradox Valley, Colorado. Local Forest officers were instrumental in the forming of this Association less than a year ago. It is composed of 15 members, running approximately 700 head of permitted cattle and about 50% more in private pasture and on other range. Since last March the Secretary-Treasurer of the Association has disbursed approximately $9,000, of which $320 was for salt, $960 for building a vat and dipping of cattle owned by members, 27 pure bred bulls were bought at an average price of $281, and $200 was spent for building drift fences on the Forest. A lively interest was shown at the recent meeting and all the old officers were re-elected to serve for another year. It was tentatively agreed that the Association would send a man or committee to the Supervisor's headquarters at Moab to assist in the approval of grazing applications and permit allotments for the Paradox and Hop Creek allotments for the coming season.

The remeasurement of a plot which was established in 1911 on the Payette Forest in western yellow pine shows greatly increased diameter growth in trees left on the area after a heavy thinning that removed all diseased, defective and suppres saplings. The growth was somewhat better upon a portion of the area which was pruned than on the area which was simply thinned. The diameter growth per year was .16" on the area thinned and pruned, .133" on the area thinned but not pruned, and .097" upon the untreated area.

One million feet of Douglas fir sawtimber was sold recently on the Minidoka Forest at $5.00 per M. The upset price was $3.50 per M feet for the green timber and $1.00 per M feet for the dead. Two bids were received. Award was made to the higher bidder.

District 6 - North Pacific District

Clerks of the Oregon Forests held their first convention January 14 and 15 at Eugene, where they were guests of the Cascade and the Siuslaw Forests, whose headquarters are there. So much benefit attended this coming together to discuss the problems of clerical work that the District Forester has been asked to make such a meeting an annual event. The program of the conference follows:

Title of Papers	Name	Forest
"The Desirability and Means of Acquiring a Comprehensive View of what the Forest Service is--its Purposes and its Policies"............		
"Filing and Finding"..................	Daniel F. Brennan........	Fremont
"Suggestions for Keeping Track of the Regulations and Instructions Bearing on a Given Subject"...........		
"Some of the Vexing Difficulties in Discharging the Duties of Forest Clerk and Suggestions for Overcoming them"........	E. Violet Cook..........	Crater
"Educating Field Men in Paper Work".....		
"Cooperation Between Ranger and Clerk".		
"Keeping the Job in Hand During the Fire Season"................................	Zella A. Ziegler.....	Columbia

District 6 - North Pacific District (Continued)

Title of Papers	Name	Forest
"Systematizing and Time-Saving"	Abbott C. Read	Siuslaw
"Suggestions for Improvement of Printed Forms"	Mont V. Livingston	Oregon
"Methods of Accumulating Data for Annual Statistical Report"	Ivy I. Boeck	Crater
"Compensation Forms, Errors, and Oversights"	Frances L. Downs	Santiam
"The Clerk's Field Trips"	W. C. Keyes	Umpqua
"The Promise Card and Follow-up System"	Adelaide King	Oregon
"Handling of Commissary for Fire-Fighters"	W. E. Naylor	Cascade
"The Property Custodian--His Duties, Methods, and Rights"	Fannie I. Abrams	Siskiyou

District Fiscal Agent H. I. Loving read a paper on "Analysis of the Work of the Office of Accounts, particularly with respect to its relation to the Forest Clerk"; Property Auditor J. G. Falck gave helpful suggestions as to the best methods of handling clerical work; and National Forest Inspector H.M. White aided the discussions. A. O. Waha acted as chairman of the convention.

Statistics compiled for 1919 in the office of the Chugach Forest, Cordova, Alaska, show that 127,645 cases of salmon, 11,849 barrels of cured herring, and 7,265 cases of clams were packed in plants operating on the Chugach under special use permit. Accurate figures of the 1918 pack are not available. However, 1919 witnessed an unusually light run of salmon, so it is likely the salmon pack fell below that of the preceding year. But herring undoubtedly showed a healthy gain. The herring industry in the Prince William Sound region of the Chugach, stimulated by the newly adopted Scotch method of cleaning, bids fair to rival the salmon industry of the same region in importance. Nearly all the canneries of the Prince William Sound country are on National Forest land.

The Oregon legislature, during its January special session, urged the State delegation in Congress to work toward securing for 1920 an adequate airplane patrol of forests along the lines indicated by Colonel Arnold, commander of the Western Division of the Air Service.

The recent planting to wild evergreen blackberries of 100 acres of privately owned cut-over land makes the most important experiment of this kind yet tried in western Washington. Preliminary to planting the berries, the land was burned over. The plants are about fifteen feet apart, and will be trained to grow properly over the logs and stumps. Berry farming on logged-off lands was urged at a recent meeting of the Grays Harbor (western Washington) realty board; figures were given to show that cut-over areas planted to berries yield good returns. This new industry started with evergreen blackberries growing wild in the clearings. District Engineer Philip H. Dater, during an inspection trip on the Olympic in September, 1919, viewed with interest berry picking going on then about Quinault Lake. He learned that 15 tons of the wild berries had been gathered and sold, with the crop not yet exhausted; that five cents a pound was paid the pickers, some of whom earned from four dollars to six dollars a day; and that the berries were canned at a factory in Montesano.

The carload of T. N. T. recently received in this District is much appreciated, T. N. T. here having proven an efficient blasting explosive, working equally well on rock or in uprooting stumps. It is planned to use it during 1920 in reducing bad grades and cutting away dangerous rocky points along different roads and trails. Blowing up of rock has begun for 15 miles of road construction along McKenzie River, Cascade Forest, which is to result in a 24-foot gravel road, with shell surface, that will increase tourist travel in the McKenzie River country.

Ranger M. M. Lewis, of the Siskiyou, has secured conviction of two game law violators under circumstances which make him worthy of a medal for distinguished service. The violation occurred in that region of southwestern Oregon where, a few years ago, a game warden was murdered and his murderer acquitted by a jury representative of the locality. Ranger Lewis heard shots which he believed fired by law breakers and found footprints in the snow leading in the direction from which the shots seemed to come. This trail in the snow was off the main line of travel and when Ranger Lewis followed it the stage was set for another such happening as the murder of the game warden. But Ranger Lewis kept on, and finally found where two deer had been killed. Then he sighted the law breakers, threading their way along a circuitous and out-of-the-way route. Lewis abandoned the trail, cut in ahead of the men, and on their approach confronted and arrested them. They were each fined $25.00 and costs. So far as known, this is the first conviction for violation of the game laws secured in the Applegate region, southern Oregon.

Insect control problems, particularly on the National Forests of the Rocky Mountain and Pacific Coast regions, were the subject of a recent conference at Ashland, Oregon, between the Bureau of Entomology personnel of the western Forest Insect Field Stations, and the Forest Service insect control men of Districts 2, 5, and 6, Messrs. Pearce, Hopping, and Jaenicke respectively. This is the third annual meeting of this kind, and the data which have already become available as a result of these cooperative investigations on the Pacific Coast have real value in the successful application of control measures, especially in yellow pine infestations in the West.

By the careful collection of data jointly by the Bureau and the Forest Service on control projects, it is possible within a few years to satisfactorily test the efficacy of control measures now in use and even to make progress in their improvement. If the money is available, a large cooperative control project will be carried out in California this year in a yellow pine - sugar pin stand. The data and conclusions as a result of this work will have wide application.

J. M. Miller, of the Bureau's Ashland station, is directing the studie under what is known as the "Ashland Conference Plan", which has the formal approval of both the Forest Service and the Bureau.

Frank Sneed, a farmer and stock raiser of Loese, Wash., was summoned to Spokane January 6 to appear before the U. S. District Court as defendant in the criminal proceedings instituted April 7, 1919, for violation of the Act of June 4, 1897 as Amended by the Act of February 1, 1905, and the regulations of the Secretary of Agriculture, which regulation is T-6 of the Forest Manual "(D) Allowing stock not exempt from permit to drift and graze on a National Forest without permit."

The case was regularly set for September 2, 1919, but defendant's motion, supported by affidavit, showed unavoidable absence of a material witness for defendant and the Court vacated the setting of the case. Meanwhile Mr. Sneed's stock, it was alleged, continued to graze upon the Forest in trespass an the Forest Service filed a second information against him and appeared with Government witnesses at the setting January 6. Defendant appeared without attorney or witness and pleaded guilty to both charges. The United States was awarded $184.34 civil damages and defendant was fined $75.00 for the first and $100 for the second offence.

The case has attracted considerable attention, Mr. Sneed being a well-known pioneer of Aeneas Valley, also many settlers and stock raisers holding annual permits to graze stock upon the Forest demanded they be given protection from invasion of unpermitted stock upon their allotments within the Forest, while still others less acquainted with Forest regulations watched the case to see if in fact the United States could collect a fee for stock which by accident drifted unpermitted upon the Forest ranges.

In the trial of the United States vs. William Chamberlain, held in Portland recently, defendant was found guilty and fined $150 by Judge Wolverton. He was given 30 days in which to pay or stand committed. On the witness stand Chamberlain named several prominent Burnt River permittees who had advised and encouraged him to carry the case to court. One of these permittees, on being questioned recently, flatly denied this, but closely following this denial comes reliable information that money for payment of the fine was furnished by this selfsame permittee. So there you are.

In order that members of the local Whitman-Minam force may keep in fit physical condition throughout the trying period of desk detail and be in proper shape for plunging into a strenuous field season next spring, they have affiliated with the Y. M. C. A. at Baker, Oregon, and report regularly three times a week for physical instruction and athletic workouts.

"I have been in the stock business for 30 years. One evening with this bulletin taught me more about grazing than I had learned in all those years", said J. H. Murray, Secretary of the Ironside C&H Association, in discussing the bulletin "Range Management on the National Forests," copy of which had been sent him by the local office.

In his illustrated lecture, "The Lure of the Great Northwest", delivered here recently under the auspices of the Baker Commerical Club, Frank Branch Riley paid a glowing tribute to the Forest Service by saying that it was by far the most efficient department of all the many branches of the Government. Mr. Riley held his audience spellbound through two hours of the most intensely interesting and educational lecture ever heard in this city. Any citizen of the Northwest who hears this lecture cannot help but have a feeling of pride that his home is the playground of America.

Sentiment among the stock associations seems to indicate a return to the individual ownership of bulls by the members instead of joint ownership by the association. All of the associations that have held their annual meeting seem to favor this change, and in two instances have voted to divide the bulls, and others will try out joint ownership another season. The reason they give is that it either costs too much to winter the bulls where they are fed in a body on purchased hay, or where they are distributed among the different members there are grave doubts on the part of some that their neighbors are giving the animals proper attention and feed.

When an experimental planting of black cherry trees was made upon the Washington Forest in the spring of 1914, the Ranger in charge of the Backus Station looked eagerly forward to the time when the fruit would be harvested and appear upon his table in the form of a series of large round juicy cherry pies.

We are therefore much interested in the following communication just received from Ranger Thos. Thompson:

> "One thing I overlooked in my last report which I intended to make special mention of is that two of the black cherry trees bore fruit last season. The fruit was about the size of a large garden pea and so bitter that if children of several families were to eat many of them the mothers would be obliged to have them labeled, as their faces would all look alike. I would suggest that if the Forest Service is contemplating the planting of any more hardwoods, that they select ones that have more palatable fruit than the black cherry."

A permittee on the Deschutes, holding a permit for 300 head, recently shipped three carloads of cattle and received three cents above the market price of that day at his shipping point.

The reason for this lies in the fact that for the past twenty years this man has consistently bred for better cattle, consequently, the buyer knows that any animal carrying the triangle brand is practically a pure-bred Hereford. There are no "Magpies" nor "buckskins", each one is all Hereford, a pure-bred animal "of a recognized beef breed."

A canteen with a sting was recently discovered by Ranger C. J. Ayres. On one occasion last summer while fighting fire, Ranger Ayres left his canteen uncorked to keep the contents cool. Returning after a round at the fire he seized the canteen and tipped it for a heavy draught, but immediately felt a most peculiar fluttering in his throat. It was a yellow jacket. Although Ranger Ayres lost no time in getting it out of his throat, the yellow jacket had already made use of its automatic hot-point on his tonsil. Almost immediately his throat began to swell, breathing became difficult, and in a short time his arms were completely paralyzed. This condition lasted for more than four hours. We hasten to add that the canteen contained nothing but water.

Forest Products Laboratory Notes

Dr. Otto Kress, who has blazed the way in the utilization of cotton hull fibre, was made happy by the receipt of the following letter:

"Dear Dr. Kress: 4th,

As requested in your letter of Dec. , we have gone over your report entitled "The Suitability of Cotton Hull Fibre for Pulp and Paper Manufacture," with a view to criticism and suggestion for revision previous to publication; but we have none to offer. You have covered the subject thoroughly.

It is probable that this work will finally turn out to be one of the most important things that has ever been done by any of our government laboratories. As the annual production of cottonseed hulls is over one million tons, the amount of pure cotton fibre which is now practically wasted amounts to over two hundred fifty million pounds and represents an annual loss of over $25,000,000. We believe that most of this will eventually be saved by the process indicated in your report.

Your work has been of great practical benefit to us in carrying out our investigation; and we take pleasure in expressing our appreciation. Your first report covering the experimental work done at Madison, cleared away some difficulties for us. Finally, the practical paper mill test runs, covered in this last report, established the industrial practicability of the process. If the commercial questions, such as freight rates and prices of raw material and product, can now be satisfactorily worked out, a new industry will be established with every prospect of rapid development. The fact that two plants are now being erected for pulping hull fibre is an indication of rapid progress. There are certain problems in the oil mill industry which we believe you could attack with great profit to the public; and for that reason we wish the Forest Products Laboratory had a more direct connection with the cotton seed products industry.

Very sincerely yours,

EAST ST. LOUIS COTTON OIL CO.,

(Sgd.) J. W. Stull,
Vice-President and General Mgr."

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

February 9, 1920.

Changes in Nomenclature

The Forester on February 6, 1920, approved the recommendations of the Committee on Tree Names and the following changes in common names should be noted. The list is supplemental to that found on page 110-S of the Manual and brings up to date all changes approved since the publication of Bulletin 17 - Check List of the Forest Treest of the United States.

The changes are as follows:

	From	To
Thuja occidentalis	Arborvitae	Northern white cedar
Chamaecyparis thyoides	White cedar	Southern white cedar
Pinus heterophylla	Cuban pine	Slash pine
Abies grandis	Grand fir	Lowland white fir
Abies magnifica shastensis	Shasta fir	Shasta red fir
Chamaecyparis nootkatensis	Yellow cedar	Alaska cedar
Tumion californicum	California torreya	California nutmeg
Tumion taxifolium	Florida torreya	Stinking cedar
Myrica californica	California wax myrtle	California waxberry
Betula alaskana	This species had not been recognized when the Check List was issued. Common name to be Alaska birch.	

The Cost of Unskilled Letters

War service has made more men learn the value of terse but clear and comprehensive letters. This is what a writer has to say on the subject in a recent magazine:

"Many business firms have realized for a long time how costly a thing unskilfully constructed letters may become. Ambiguity, omission of essential details, unnecessary length, untranslatable signatures, lack of friendly personal touch, roughness of diction, omissions of enclosures, the clumsy or inadequate form letter -- all these and other sins of correspondence are mischief-makers. In some large offices specialists review the daily correspondence, in the effort to effect improvement, and call attention of employees and owners, too, if necessary, to the delinquencies and bad habits of their letterwriting. They work out form letters, and seek generally to reduce the length of correspondence wherever it is possible and otherwise act for efficiency. Not only does the result show itself in relations with those with whom the firm does business, but there is a direct money-saving in bills for stenography and typing and office supplies. The Army and Navy training has helped this work along. Many a man who thought he could write a first-rate letter has had his conceit destroyed by some one higher up in the service who received his efforts. The Army rule of typing the signature as well as penning it has been adopted in some establishments, which is an excellent plan, for many signatures are blind though their owners do not always realize the fact. 'Dictated but not read' and 'signed in the absence of' are less often seen than formerly, because they could not be used officially in the service, though the protest against the practice had already been heard and in many cases heeded. At the top of a letter the subject to be treated is now often found. This, too, had previously been established as a practice in some offices. Altogether this new influence which came into business out of the war should work out results of a good deal of importance. The beginning has been made. The added impulse should send the movement for good letterwriting a long step forward. Among the customs which might well become general is that of indicating, when answering a letter from some one connected with a large company, the person for whose attention the letter is intended. In every large office time is wasted almost daily in trying to determine for whom letters are intended."

Salary Readjustments Bring Relief

Approximately five hundred employees of the Forest Service have been made the happy recipients of salary increases during the past month. These promotions are the result of the arduous and continued efforts of Col. Graves to get relief for the field force.

The increases in salary have come about in several ways. The many changes in field personnel have made it desirable to increase field supervision and inspection. To accomplish this effectively was not possible by drawing further on the personnel of the district offices. The solution was found in designating a number of the supervisors of experience as district forest inspectors. Because of the increase in responsibility and the change in the character of the work the Forester was able to get the Secretary's approval to the creation of these special technical jobs, for which salary payments properly come from the miscellaneous roll. Thirty-one inspectors were designated. Coincident with these special appointments and promotions it was possible to effect an improvement in the salary status of the supervisors and deputies on the statutory roll. In addition to the changes on the statutory roll a large number of promotions was approved by the Secretary for men on the miscellaneous roll so that there has been a rather general readjustment in salaries.

Prospects for further salary increases for the field force are to be found in the appropriation bill reported out by the Committee and which is now under consideration by the House.

The bill reported provides the following increases:

$200 for the Alaskan Supervisor.
$100 for the eight Supervisor positions of $2,400.
$180 for all other Supervisor and Deputy positions.
$120 for all Ranger positions.

Whatever action is taken on these recommendations will not be effective until July 1, 1920, the beginning of the new fiscal year. By and large the year 1920 seems to have put a silver lining in the clouds that have hovered over the Forest Service salaries.

The question of salary increases for clerical positions both in Washington and in the field are tied up with the work of the Reclassification Commission, which has been studying the problem for the past year and which will submit its report to Congress not later than March 12, 1920.

The Commission was limited to the consideration of salaries of the 107,000 Government employees in the District of Columbia, but the expectation is that any readjustment and scheme of reclassification that may be adopted will later be extended to the field. This means that relief of Forest Service employees in clerical positions will also come.

Travel in the Field

The class of accommodations furnished Forest officers by many of the hotels in the small towns and out-of-the-way places makes the following not without point:

"The landlady of a well-known London boarding-house made a point of asking her departing guests to write something in her visitor's book. She was very proud of some of the names of the people inscribed in it, and of the nice things that were said.

'But there is one thing I can't understand,' she confided to a friend, 'and that is what an American put in the book after stopping here. People always smile when they read it.'

'What was it?' queried the other.

'He wrote only the words, "Quoth the raven!"'

Black Walnut Continues Black

A change in name was recently proposed for Black Walnut (Juglans nigra) by an association that is stimulating the use of this wood and which would like to bring about the adoption of the name of American Walnut. The decision of the Forest Service was that as far as it was concerned it would not approve or advocate the change. So the Check List name will continue in all Government publications.

Requests for changes in names are not infrequent. They generally come from sources that are interested in putting the particular wood on the market and who feel that the old name has not the charm or persuasive power that present day conditions call for.

Some Recent Publications

The names of several Forest officers appear on the title page of a number of preprints from the Fifth Annual Report of the National Advisory Committee for Aeronautics. The reports form a part of the many contributions made by the Forest Service during the war and are as follows:

Report No. 66 - Glues Used in Airplane Parts - S. W. Allen and T. R. Truax.

Report No. 67 - Supplies and Production of Aircraft Woods - W. N. Sparhawk.

Report No. 68 - The Effect of Kiln Drying on the Strength of Airplane Woods - T. R. C. Wilson.

Examination for Grazing Assistant

The U. S. Civil Service Commission announces an open competitive examination for Grazing Assistant on April 7 and 8, 1920. Vacancies occurring in the Forest Service in connection with range investigations and grazing administration, at $1200 to $1500 per year, and positions requiring similar qualifications at these or higher or lower salaries, will be filled from this examination.

The Pulp Wood Situation

Senator Underwood has introduced a joint resolution authorizing the appointment of a commission to confer with the Dominion Government or the provincial governments of Quebec, Ontario, and New Brunswick relative to the claims of the American interests now holding leases of Crown lands acquired prior to the passage of restrictive orders in council of the said Provinces, as follows:

"Whereas newsprint paper is a commodity of universal use and is indispensable in the educational process of modern civilization, and the paramount importance of a sufficient production of newsprint to supply the needs of the press of the United States is a self-evident proposition; and

Whereas practically the whole content of newsprint is composed of mechanical and chemical products of pulp wood, the supply of which in the eastern part of the United States is being rapidly exhausted by the growing demand, and the price of which is being advanced to unprecedented levels; and

Whereas, the existing scarcity of pulp wood, and its threatened total exhaustion in the United States has become a matter of such grave concern to the paper industry, the users, and the manufacturers of forest products, the Federal Government, and the general public that the Forest Service, the lumber and pulp and paper associations, and the forestry authorities of the country are now formulating a broad and comprehensive national forest conservation and reforestation plan for early adoption; and

Whereas, prior to the year 1910 American paper producers purchased and acquired leases of Crown lands in Canada for the purpose, with the knowledge and consent of the respective governments of these woodland Provinces, of cutting the wood on said leased limits, and shipping it to their paper mills in the United States; and

Whereas said leases by statutory provision conveyed to the lessees 'all rights of property' to the wood cut on said limits, and American interests, confident of their rights so conveyed to them, did invest large sums of money in building piers, dams, and booms in the rivers flowing through their limits and in the erection of taking-out, wood-preparing, and shipping plants, and for many years, to wit, from about 1890 to 1910, particularly in the Province of Quebec, The Pulp Wood Situation (Continued)

did cut the wood on said limits and ship it to their mills in the United States in large quantities, with full knowledge and free consent of the provincial government, and in strict accordance with 'all rights of property' to them by statute conveyed, and during the same period did pay to the provincial government all prescribed fees and rentals; and

Whereas in the year 1910 the lieutenant governor of Quebec in council did issue an order prohibiting the exportation of pulp wood cut from Crown lands unless manufactured into lumber, pulp, or paper, thereby invalidating the rights of property by statute conveyed, and doing grievous and irreparable injury to said American interests by making valueless their large investments in river improvements and wood-preparing and shipping plants, and by depriving said American interests of the wood to which they had been conveyed all property rights; and

Whereas, said American interests did acquire and now hold leases of approximately 10,000 square miles of Crown lands in the Province of Quebec, being but 5 per cent of the wooded area of said Province, on which they have regularly paid all prescribed fees and rentals, which said area contains standing pulp wood estimated to aggregate about 32,000,000 cords, the annual growth and increment of which is estimated to amount to about 1,280,000 cords, or, if available for the use of American interests which own the leases of said 10,000 square miles of woodlands, sufficient in annual yield to relieve the present scarcity and prevent threatened exhaustion of pulp wood in the eastern part of the United States, to lower the cost of the raw material of the American newsprint industry, and to stabilize the price of newsprint paper to the consumer, besides assuring an additional supply of raw material that would justify investments for increased production and affording the relief needed while awaiting the results of a national policy of forest conservation and reforestation; and

Whereas the press of the United States, through its national organization, the American Newspaper Publishers' Association, has adopted resolutions urging such action by Congress as will restore the property rights of American interests to the wood on their leased limits in Canada, and particularly on the 10,000 square miles of Crown land limits in Quebec, by them leased, and thus provide the raw material needed by American mills; and

Whereas similar restrictive orders in council are in effect in the Provinces of Ontario and New Brunswick: Now, therefore, be it

Resolved by the Senate and the House of Representatives of the United States of America in Congress assembled, That the President of the United States be, and he is hereby, requested to appoint a commission of five, and by appropriate authority to confer on this commission the right, on behalf of the administration and the Congress, to present to the Dominion Government or the provincial governments of Quebec, Ontario, and New Brunswick, as may be proper, the claims of the American interests now holding leases of Crown lands acquired prior to the passage of the several restrictive orders in council of the three Provinces aforesaid, and to negotiate with said Dominion Government, or with said provincial governments, the cancellation of said restrictive orders in council as they apply to Crown land leases acquired by American interests prior to the passage of said restrictive orders; and be it further

Resolved, That in the event the cancellation of said restrictive orders in council can not be agreed to by mutual arrangement of the Governments of the United States of America and the Dominion of Canada, that said commission shall investigate, consider, and report to the Congress what action should be taken by the Congress that will aid in securing the cancellation of said restrictive orders in council, or their modification so that they may not continue to militate against the interests of the people of the United States who are now affected by them; and be it further

Resolved, That for the necessary expenses of said commission the sum of $50,000 be, and it is hereby, appropriated from the moneys in the Treasury of the United States not otherwise appropriated."

Branch of Lands Reorganized

The reorganization of the Branch of Lands was effected on February 1, and it now consists of the following offices:
(1) Acquisition; (2) Occupancy; (3) Classification.

The Office of Acquisition, in charge of Forest Inspector W. W. Ashe, will handle exclusively purchases under the Weeks Law. Other forms of acquisition, such as Boundaries and Land Exchanges, will be handled by Mr. Sherman in the office of Assistant Forester.

The Office of Occupancy, in charge of Inspector of Lands C. H. Squire, will include Special Uses, Claims, and Rights of way as heretofore, and in addition, Status and Settlement.

The Office of Classification will handle the classification work. No appointment or assignment will be made to this office for the present. The Classification records will temporarily be placed in charge of W. J. Mangan.

The Entry Survey Work will hereafter be handled by the Branch of Engineering.

Some Interesting Resolutions

The National Wool Growers' Association held its annual convention at Salt Lake City on January 21, 1920. Among the resolutions adopted are to be found the following, which are of particular interest to Forest officers:

National Forest Grazing

"Whereas, The nation's supply of meat depends largely upon the intelligent use and administration of the National Forests; and

Whereas, The grazing capacity can be materially increased by the construction of drift and division fences, building of roads and trails to areas at present inaccessible, development of stock watering places, the elimination of poisonous plants, and the destruction of predatory animals and range-destroying rodents; and

Whereas, National forests are administered from funds, to a great extent, collected from the livestock industry, and in view of the fact that the funds appropriated by the Government to help improve the range conditions are pitifully small, being only $50,000 to divide between 165 forests, a sum which will not annually maintain improvements so far constructed; therefore be it

Resolved, By the National Wool Growers' Association, that the attention of Congress be called to this matter, that additional funds may be provided, if possible, for range improvements within the National Forests.

Forest Service

Whereas, For the past few years it has been the policy of the Forest Service to permit cattle to enter some of the Forests in advance of the date on which sheep were permitted to enter, and in many instances to graze without restriction on ranges used by sheep; and

Whereas, Since this policy has been inaugurated, these ranges have materially depreciated as sheep rangds, and if this policy is continued, it means a considerable reduction in the number of sheep that will be allotted to such ranges; therefore, be it

Resolved, That we most earnestly urge the officers of the Forest Service to use every effort to find spring range for these cattle on areas other than those to be devoted to sheep grazing and that sufficient summer range for cattle be found without infringing on and destroying existing sheep ranges.

Forest Officials

Whereas, The Sheep growing industry of the United States is dependent largely upon the proper and efficient administration of the grazing lands within the National Forests; and

Whereas, Men of high quality and with a knowledge of range conditions and requirements are necessary to properly administer the said grazing lands; and

Whereas, The United States Forest Service has lost and will continue to lose, their most valuable men on account of the inadequate salaries paid by the Service; and

Whereas, The loss of such men is a loss keenly felt by the stock growers; therefore, be it

Some Interesting Resolutions (Forest Officials) Continued.

Resolved, That we urgently ask our representatives in Congress to secure the enactment of the necessary legislation to provide adequate compensation for the employees of the Forest Service, which will justify men now in the Service remaining in their present positions, and will encourage suitable men to enter the Forest Service in the future."

Grazing on Municipal Watersheds

The protection of watersheds from which supplies of water are secured for over 2,000 cities, towns, and hamlets in the West is one of the important and constantly increasing duties of the National Forests. One of the first requirements which we undertake to enforce in protecting these watersheds is a better system of handling the stock upon the area. With sheep this, of course, can be brought about much easier than with cattle. Sometimes the question is more involved, and unless some fencing is done, which is not always practicable, the owners must handle their stock so as to prevent trespass on the closed areas. These requirements have not always been received with much favor by many of the stockmen. The feeling generally is that it is a case of "Let George do it" and if the municipality desires the watershed protected it should at least stand the expense.

Without entering into the ethics of the case and realizing that it is up to the Forest Service to enforce such regulations and restrictions as are reasonable, the friendly cooperation of the owners of the permitted stock must be secured if we are going to succeed in complete protection of these areas.

While going through the files of the Pike National Forest last summer a circular letter issued by Supervisor Shoemaker to his permittees struck me as being so admirable in its tone and so constructive in its character as to merit calling it to the attention of all the members of the Service. Mr. Shoemaker is no longer a member of the Forest Service but it is never too late to give a man credit for work well done. The circular which he sent out to his stockmen must have impressed them by showing so graphically the manner in which the future of their stock business was tied up with a proper observance of watershed protection. It undoubtedly secured from them a better spirit of cooperation in handling their stock to prevent trespass on or pollution of the closed areas.

The following are the main features of the circular letter:

"You are the holder of a permit to range stock on the Pike National Forest. Nearly three-fourths of this range is tributary to the water supply of the City of Denver, and much of the remainder is on watersheds supplying other towns and cities. The method of handling your stock therefore becomes a matter in which the people of Denver and smaller cities are deeply concerned.

That there is some opposition to the grazing of livestock upon municipal watersheds goes without saying. This, taken in connection with the importance of keeping city water supplies pure, leads sometimes to the complete closure of watershed areas to grazing, if our objects cannot be attained by better handling of the livestock. When we regard it in this light the fact that your range is tributary to a municipal water supply immediately becomes a question of great importance to you. The Forest Service has always considered watershed protection one of the first essentials in the administration of the National Forests.

In general we believe that livestock can be so handled that their presence will not be a menace to the purity of the streams. No doubt you will agree on this point. But are you doing your best to handle your stock so as to reduce the chances of contamination to the minimum?

As stockmen you number only a few hundreds, while the number of people whose domestic water comes from these streams reaches into the hundreds of thousands. If a serious disagreement or conflict arose it would not require a prophet to tell how it would end. Are you, as a stockman, being as considerate of the water user as can reasonably be expected? Are you careful to remove dead animals from springs and streams and to immediately burn or bury them so they will not constitute even a seeming menace to the purity of the water? Have you considered that carelessness on your part or on the part of other stockmen may lead to the closing against stock of the entire range to the great detriment of the livestock industry as a whole and to you individually?

Grazing on Municipal Watersheds (Continued)

The purpose of this letter is to bring this point clearly to your attention in the hope of stirring up interest and securing a coordinated effort on the part of all stockmen in removing any chances of complaint that they are not carrying out the regulations of the National Forests in matters of this kind.

If your carelessness and the carelessness of others should result in closing an entire range for watershed protection you would have to suffer for it. Do you not see the importance of taking hold of this matter vigorously? Not only should you dispose of your own dead animals but you should take immediate action to see that those which come to your notice belonging to other people are dispos d of."

Will C. Barnes

Washington Notes

W. C. Stump, for years a member of the Forest Service, was run over by a street car and killed instantly in Washington on February 1, 1920. Since October, 1918, Mr. Stump was accounts officer for the Insecticide and Fungicide Board. Before that he was clerk in accounts in the office of the Fiscal Agent, in the Forest Service from 1906 to 1914 in Denver and from 1914 to 1918 in Washington. Forest officers will always remember Mr. Stump as a genial and expeditious handler of the field man's expense account.

At the annual Christmas celebration at the Atlantic Building Mr. Stump, by his singing, playing, and whole-hearted living up to the part of Santa Claus, did much to strengthen the reputation of Santa Claus in the hearts of the children.

John D. Jones, who has been in the Washington office for the past two years and in charge of Land Classification, has been transferred to Albuquerque where he will assume the duties of Assistant District Forester in charge of Lan , succeeding Mr. Pooler who was promoted to District Forester. Mr. Jones expects to leave Washington about March 1.

Forest Examiner R. V. Reynolds has been transferred from Lands to the Branch of Research and assigned to the Office of Forest Products.

District 2 - Rocky Mountain District

Miss Anna A. Mellon has returned to the district office after an absence of over two years. Miss Mellon is by no means a stranger in District Two, for she was a clerk in the Office of Lands coming from Washington at the formation of the district office.

A representative of the Colorado State Game and Fish Department who has been making a study of the elk situation in western Colorado has made a proposal to the Forest Service to protect an area of approximately 100,000 acre of land suitable for winter range for a band of 1,000 elk, which graze in the summer between Battlement, Gunnison, and the Sopris Forests. The area has to some extent been the natural range for the game in the past. About 20,000 acr s of the area are along the Muddy and have been eliminated from the Forests. The land has no forest value and was eliminated because it possessed some agricultural value and could be acquired under the Enlarged and Grazing Homestead law. It is largely unsurveyed and has not yet been restored to settlement or entry. The field work was completed by the Surveyor General during the past summer and approval of the survey may be expected at an early date. Some stockmen have made settlement upon the area in trespass, and game violations have also been reported. The cases have not yet been tried. The elk had come down to the lower regions, but were unable to secure sufficient feed because the lands had been heavily grazed during the summer by both cattle and sheep outside the Fore . In returning to the high country many were unable to reach the open hillsides where feed was plentiful and the loss last winter was reported as considerable, but this winter it is believed that there is enough feed uncovered to provide adequately for the elk.

The Game Department was seeking advice as to how to secure the withdrawal of this land and prevent it passing into the hands of private owners. It is the intention now to interest the local game association and get a bill through Congress to restore this area to the Battlement Forest for the express purpose of providing winter grazing in that vicinity. If successful, the Game

Commissioner desires the cooperation of the Forest Service in protecting the adjacent Forest range which is suitable for winter feeding.

An experimental antennae aero has been erected by Telephone Engineer H. R. Kylie on the roof of the New Federal Building. It has already attracted the attention of a large number of high school boys who have been in to ask all about it. Messages have been picked up from Germany and the Arlington Tower. Arrangements are under way to erect one on the Federal Building in Ft. Collins, Colorado.

The Forester recently approved an increase in the acreage to be reforested annually on the Minnesota Forest to 1,000 acres. Until the status of the land within this Forest is definitely settled and actual transfer of the land is made to the Forest Service, no increase in equipment or overhead expenses is authorized. However, this will not affect the increase in planting, since most of the nursery stock used is seedlings. The land in this Forest is owned by the Chippewa Indians to whom go all proceeds from the timber cutting. Ten per cent of the white and Norway pine is left for seed and when the cutting is completed, an appraisal of the land and the remaining stumpage is to be made. On the basis of such appraisal the Indians are paid, and the land transferred to the Forest Service. For the present fiscal year, the planting of 650 acres is contemplated.

The officers in charge of the Forest Service exhibit at the National Western Stock Show have just completed a very busy three weeks. The first week was spent in preparing and installing the exhibit; the second in explaining, demonstrating, passing out fire prevention buttons, counting the visitors, keeping tab on the loaned stepladder and broom, and fighting off the "flu." The third week found the "flu" in the ascendancy and no one able to write the final story of the Stock Show.

The exhibit consisted of four main features. Recreation was illustrated by a miniature scene. Fire protection included the Osborne fire finder, fire fighting tools, a miniature electric airplane, a 25-man nested cooking outfit, and a wireless telephone in operation. The Grazing section showed the growth and intensity of the grazing business and what is being done to make the ranges safe for stock by the eradication of larkspur and predatory animals. The Roads section was shown in miniature. A six-inch polished section of a Douglas fir tree over 3 feet in diameter called attention to the fact that "over 300 years are required to produce a tree that size. A forest fire can destroy it in a few seconds." About 25,000 people visited the exhibit.

District 3 - Southwestern District

Supervisor Kircher of the Santa Fe has been made Forest Inspector in the District office and during the coming season will be the personal representative of the District Forester in perfecting our fire-fighting organization. Mr. Kircher has had ten years of service in this District and has had varied experience in all lines of Service work. During the coming season he will visit each Forest to assist in perfecting fire plans.

District Engineer C. A. Long gave a lecture at the University of New Mexico last week on Field Astronomy and daylight methods of obtaining azimuth and latitude. This lecture is the first of a series to be given by Mr. Long.

John D. Guthrie, Forest Supervisor of the Carson, has been transferred to the District office at Portland, where he will be in charge of the Information and Exhibit work. Mr. Guthrie came to District 3 in 1908 and was assigned to the Prescott as Deputy Supervisor. In 1909 he became Supervisor of the Apache, and in 1914 he went to the Coconino. On his return from France last fall Mr. Guthrie was appointed Supervisor of the Carson.

Ranger Garst of the Datil, who is conducting the Magdalena Mountains kill-factor experiment, reports that a deer-lion fight recently staged near the Taul Ranch resulted fatally to both. The deer was found dead, with a dead yearling alongside. Tracks of a larger lion were seen in the vicinity, and it is believed that both animals probably attacked the deer.

District 4 - Intermountain District

Forest Supervisor Lee E. Cooper of the Bridger Forest writes that local Forest officers are assisting in the proposed formation of a commercial club to represent the Upper Green River Valley section, and expect to take an active interest in the organization. The need for such an organization is great. A meeting to effect an organization was called at Pinedale February 4.

A report comes from the Bridger of two large buck deer getting their horns locked in a fight near the head of Fremont Lake and tumbling into the lake and drowning. The locked horns were cut out of the ice and taken to Fremont Ranger Station. Both were large heads. The locked horns can not be pulled apart.

The big game situation on the winter elk range on the Bridger looks much brighter now than it did a month ago. Ranger Rickert just returned from a ski trip to Green River Lake and reports that most of the elk have left the sidehills and flats where they usually winter and have gone up to timberline where the snow has blown off and where there is some grass. Another bunch has followed up Green River on the ice to near the head of the main canyon, eating the grass on the overhanging river banks. There has been no snow at Green River Lake for a month. If spring storms are not too extended or heavy, most of the bunch, it is thought, will now pull through, as many of the elk are still in fair shape. The elk have never been known to leave their regular winter range before, but this season were forced to leave on account of lack of feed. The heavy wind also helped out by blowing snow off of some of the higher ridges.

The Weber Canyon road project, which leads from Salt Lake to the heart of the Uinta mountains, has aroused considerable interest in the vicinity of the Wasatch Forest. Five permanent organizations representing 3,700 people and 70 distinct lines of business have petitioned Forest Supervisor Parkinson at Salt Lake for an allotment of funds to push this project.

The Timpanogos Club, an organization of outdoor enthusiasts, who feature a hike up Mt. Timpanogos on the Wasatch Forest each season, is very anxious to stage a scene for a motion picture company this summer. The club wants the Forest Service to use the necessary persuasions to interest a movie company in taking the picture.

Forest Ranger Morgan Parke of the Wasatch Forest has been very successful in bringing together sportsmen of Summit County, Utah. On the evening of Tuesday, January 27, the Summit County Fish and Game Association was organized. Two old timers were so enthusiastic that they paid their dues for five years in advance. Five towns are represented on the Board of Directors.

People often get the impression that District 5 has a monopoly on all the desirable climate in the country. Such is not the case. On January 28, the electric fans in Forest Supervisor Parkinson's office at Salt Lake City were buzzing merrily, the windows were wide open, and the heat was turned off. California readers please take note.

The Mt. Trumbull Division of the Dixie Forest has been transferred to the Kaibab Forest effective April 1.

Early last summer, a movement was started in Elko, Nevada, to organize a fish and game club, but no active drive for membership was made at that time. Jack Robbins of Elko was elected president, and Game Warden Cross secretary. Early in January, the local Forest officers of the Humboldt National Forest asked that the club endorse a movement for the creation of a game sanctuary, including both the Humboldt and Ruby Divisions of the Humboldt Forest, for the protection of all big game. In response to their appeal, a meeting was called at the Retail Merchants' room on Monday evening, January 19. There was a good attendance at the meeting, and after a talk by Deputy Forest Supervisor Oscar Mink, it was unanimously voted to give the project the approval of the Elko County Fish and Game Club.

It was also decided at this meeting to make a drive for membership, each of those present pledging themselves to bring in a certain number of members. As a result, over 100 members have been secured already.

Supervisor Payne of the Humboldt Forest transmitted to the District Office a petition circulated throughout Elko County by the Fish and Game Club. This petition is addressed to the District Forester and his superiors and the Nevada State Game Warden and his superiors, urging them to take action looking toward the creation of the game sanctuary above referred to. The Club also extended an invitation to the District Office to be represented at their smoker on the evening of February 2. The invitation was accepted and Forest Examiner S. B. Locke, in charge of our fish and game activities, represented the district office.

No distinction is being made by the Union Pacific Railroad between axe-hewn railroad ties and ties of equal dimension slabbed on two sides with a saw, according to Purchasing Agent G. C. Smith.

District 5 - California District

N. H. Sloane, Forest Supervisor on the Shasta Forest, has resigned. Mr. Sloane got his start in 1911 as Forest Guard on the Monterey Forest, passing through the grades of assistant forest ranger and forest ranger to that of forest supervisor. In 1916 he was transferred to the Shasta, which position he held up to the time of his resignation. Information is not at hand to indicate just what part he is to play as a private citizen.

District 6 - North Pacific District

Camera magic has transferred Eagle Creek Trail, pride of the Oregon National Forest, to the movie screen. Under the title When Nature Smiles, the picture has been released by the Paramount Company and is now showing in various parts of the country. It was seen in Portland last week. The pictures are accompanied on the screen by suitable verse, written by a member of the District Forester's staff. The pictures and verse together give the big idea - reveal Eagle Creek trail and canyon to thousands who could never see them otherwise. When Nature Smiles opens with Wahtum Lake, where the trail ends. The verse explains that the youngsters sporting in the Lake are Boy Scouts. Tunnel Falls, where the trail crosses Eagle Creek not by a bridge but through a tunnel drilled in rock back of the falls, are shown. Here the verse suggests the ingenuity and skilful workmanship that achieved the tunnel. As the pictures move, the text calls attention to the threatening poise of mighty impending rocks, and to the vise-like canyon; specifies that the fish being caught in Eagle Creek are trout; names Metlako Falls; aids the picture in describing the rock-faced bridge that arches over the stream near the end of the trail; and informs that salmon are to be had here in Eagle Creek. The verse stimulates imagination by allusions to the "singing" stream and its flying spray, dripping maidenhair, and fir trees' shade; and adds the pleasure of rhythm to the pleasure of beauty. Its author named it "The Ranger's Trail by the Singing Stream," and sought to play up the Forest Ranger's relation to the trail. It existed as a dream in the Ranger's mind before he had carved it out of the rock. "The stream, the pictures, and the rhymes" end at the picnic ground.

The convention of the Washington State Woolgrowers held at Walla Walla, Washington, January 23, gave an afternoon to discussing questions concerning health of sheep and grazing. Assistant Forester Will C. Barnes made an address at the final business session. The Woolgrowers advocated better salaries in the Forest Service. Also they formally adopted two French war orphans, to be educated at the State College, stipulating that the girls appear at the convention next year in Spokane dressed in Washington wool. This adoption by the Woolgrowers led to a similar one by cattlemen present at the convention. They are arranging to have two Scotch lassies educated at Washington State College at the expense of the Northwestern Shorthorn Association.

Plans for a lookout house on Mount Rainier suggest the airplane as a feasible means of getting necessary materials to the top. The crater of Mount Rainier, smooth, slightly dipping, and covered with snow, seems well adapted for a landing field. A bombing plane, could one be secured, undoubtedly would be more suitable than a scout plane for the intended transportation. It is hoped that the cooperation of the War Department in aerial patrol may include cooperation in making transportations for the Mount Rainier lookout house, even to the extent of landing a bombing plane. Carrying material to the summit by any other method than the aerial would be tedious and expensive. It is the opinion of Supervisor Allen, who first suggested the airplane transportation, that interest in it might result in a greater degree of public cooperation in preventing fires, by awakening interest in all the efforts along that line of the Forest Service and its cooperators. Mr. Allen further suggests utilizing natural steam by so placing the lookout structure that such steam may be brought into it, perhaps through a register. He mentions that mortar used in building the lookout house might be kept from freezing by this steam. The structure may be built with moneys from the Forest Service, the Park Service, and the Weeks Law funds.

District 6 - North Pacific District (Continued)

The construction of a bridge across the Columbia River between Washington and Oregon, two miles west of Cascade Locks, has been authorized. This bridge would make possible a loop trip over the Columbia River Highway to Cascade Locks, Oregon; across the bridge to the Washington shore, and back over the North Bank Highway to Vancouver; thence across the interstate bridge and back to Portland.

A preliminary meeting has been held in Portland of the delegates appointed by Governor Olcott to represent Oregon at Washington, D. C., in the conference to urge appropriation by Congress of $100,000,000 per year for five years for post roads and $10,000,000 per year for ten years for county and State roads within the National Forests. This delegation points out that the immediate construction and improvement of Forest and post roads is dependent upon these appropriations. Charles Hall, president of the Oregon State Chamber of Commerce and a member of the committee of seven appointed by Governor Olcott to help urge the importance of appropriations for roads through the National Forests, is quoted as saying:- "We feel that Congress should be responsive to the voice of the American association of State highway officials. * * * There is unanimity among the highway representatives from forty States that the roads in National Forests should be built with funds furnished from the Treasury and that it is only justice to the States that are deprived of obtaining revenues from such landed areas that this be done. The delegations from Oregon, Washington, California, Idaho, Nevada, Arizona, New Mexico, Utah, Wyoming, Colorado, South Dakota, Montana, and Alaska will act as a unit, and feel assured of the united support of the entire congressional delegation from these states. That sort of unanimity should be influential in obtaining a respectful hearing and earnest consideration for the measures the delegates will make their plea for, both before the committees of Congress and on the floor of both houses when brought up for passage."

District Seven

Supervisor Verne Rhoades, of the Pisgah National Forest and Game Preserve, has been in the District Office for the past ten days. He reports that the cooperative agreement for the survey of the Marion and Micah road has been signed by Secretary Meredith, and that the survey will be started by April 1.

A contract has been let for the construction of the Bennett Gap Section of the Pisgah Motor Road in the Pisgah National Forest and Game Preserve. This project has been under consideration for the past three years, but only recently were sufficient funds allotted to insure the construction of the road.

Probably no proposed road in the East will open up a more picturesque part of the National Forests than the Pisgah Motor Road. Autoists will be able to motor from Asheville via Candler to the north boundary of the Forest, thence up the tortuous seven mile climb to the Lodge, passing through the buffalo pasture on the way. From this point the top of Mt. Pisgah, from which can be seen the towering peaks in four States, can be reached by trail in one half hour. After climbing Mt. Pisgah one will feel like continuing another mile to the Hotel Weston, where dinners, known only to the South, are to be served. Leaving the hotel, the road winds along the top of Pisgah Ridge for a few miles and then gradually drops down to the famous "Pink Beds." It is from this point on through the Forest to Davidson River that the road will be improved, thus providing an exit from the south side of the Forest. It will then be possible to return to Asheville by way of Hendersonville, making a 90-mile ride in all.

Needless to say the people of Asheville and visiting tourists are looking forward to the day when the road will be open to travel.

Madison Laboratory Notes

A. T. Upson, Forest Supervisor of the Pike Forest, and A. M. Cook, forest examiner in the district office, have been transferred to the Forest Products Laboratory.

Mr. Upson will become chief of the Section of Laboratory Operation, which corresponds closely to the office of Operation in the districts. The peculiar nature of the work at the laboratory brings with it new problems, such as the development of methods to increase the efficiency in the various classes of laboratory work. In the districts the personnel is widely scattered, while at the laboratory the personnel works very largely in one place under conditions which approach closely working conditions found in factories. The establishment of the Section of Laboratory Operation is largely the outgrowth of experience gained during the war when work at the laboratory was at its peak.

Madison Laboratory Notes (Continued)

Mr. Cook becomes chief of the new Section of Industrial Investigations, which will conduct a series of field studies on technical questions relating to the timber and other wood-using industries. The work of the Section will cover all technical questions from the strictly laboratory investigations to the standing tree. The field is exceedingly important and through the establishment of the section will fill the need for a class of investigations which it has not been possible to cover adequately in the past.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

February 16, 1920.

Secretary Meredith Visits the Forest Service

Mr. Edwin T. Meredith, Secretary of Agriculture, called at the Atlantic Building on February 14, 1920, and opportunity was given to branch and office chiefs to meet Mr. Meredith at an informal gathering held in Col. Graves' office.

Secretary Meredith states that it is his desire to make the work of the whole Department effective for and available to the whole country and that the accomplishment of this depends on the cooperation of each member of the Department.

Col. Graves assured the Secretary that he could count on the members of the Forest Service to do their utmost in their respective activities.

James R. Riggs, Assistant Secretary, and Floyd R. Harrison, Assistant to the Secretary, accompanied Secretary Meredith.

A Letter from Secretary Houston

THE SECRETARY OF THE TREASURY

WASHINGTON

February 7, 1920.

My dear Colonel:

I very greatly appreciate your note of February 6th. One of the first things that occurred to me after I realized that I was going to leave the Department was that I should lose official contact with the Forest Service and with you. It is quite impossible for me to tell you how much I have been interested in the national forests and how much I have enjoyed working with you and with the exceedingly fine force of men under you. I wish I had had an opportunity to meet very many of your officers and tell them how much I thought of them. Of course I shall continue to be interested in our forests and in the conservation of our resources.

With best wishes,

Faithfully yours,

(Sgd.) D. F. Houston.

Mr. H. S. Graves,
Forester,
Department of Agriculture.

CONGRESS DISCUSSES THE GRAZING FEE

During the hearings on the Forest Service section of the estimates for the next fiscal year, the Committee on Agriculture indicated very clearly by the questions asked and suggestions made that the majority of its members believed the charges made for grazing permits were very much less than they should be and that an increase to the appraised value of the pasturage on a commercial basis should be made without awaiting the expiration of the existing five-year permits in 1923. It was shown to the Committee that the present rates were based upon commercial rates charged for pasturage on lands of similar character in 1915 and 1916, with a deduction of one-third for the disadvantages in National Forest restrictions and requirements.

Admission was made by representatives of the Forest Service that the commercial rates for pasturage have doubled since then and that a readjustment now to present values would at least double the rates charged on the National Forests, but it was contended that this should not be done in fairness to the stockmen who have been promised that the present rates will continue until 1923, and also that is was inadvisable to make a readjustment upon the basis of present inflated values and abnormal conditions.

The Committee evidently did not feel that these reasons were sufficiently strong to warrant allowing the present rates to continue and accordingly included in the Agricultural Appropriation Bill language intended to require an increase in the grazing fees to the appraised value on a commercial basis, beginning with the calendar year 1921. When this item was reached in the reading of the bill for amendment before the House of Representatives, the point of order was made against it by one of the members from a Western State on the ground that it was new legislation, and after a discussion which indicated very clearly the purpose of the Committee, the point of order was sustained and the item stricken out.

The next day an amendment was offered by the Chairman of the Committee on Agriculture which read as follows:

> Provided further, That no part of any appropriation in this act for the Forest Service shall be expended on any national forest in which the fees charged for grazing shall be at a rate less than 300 per cent of the existing rate.

The point of order was made against this clause and, after debate, sustained by the chairman of the Committee of the Whole House on the state of the Union.

An amendment was then offered requiring the rates to be increased to the appraised value as determined by the Secretary of Agriculture, which also was rejected upon the point of order. Two other amendments were offered in different form but with the same object in view, and after debate each was rejected upon the point of order, which was made and sustained.

The debate on these amendments consumed practically the entire time of the session of Tuesday, February 10, and may be found in the Congressional Record of that date.

On Wednesday, the following day, an amendment was offered to the item "for estimating and appraising timber and other resources, etc." as follows:

> Provided, that $25,000 may be used by the Secretary of Agriculture for the purpose of ascertaining the appraised value of pasturage upon the national forests, which appraised value when determined may, in the discretion of the Secretary of Agriculture, be made the basis of the charge for grazing permits upon such forests.

The point of order made against this was overruled and the amendment included in the bill. If accepted by the Senate this amendment will require a study of the grazing charges on other lands to be made by the Forest Service, the results of which may be used, in the discretion of the Secretary of Agriculture, in the determination of future grazing rates, and incidentally by Members of Congress in a further discussion of the subject.

The Committee on Agriculture omitted from the bill the item for grazing experiments and investigations which for several years past has provided $35,000 for this work. An amendment offered by one of the western Members to restore it to the bill was vigorously opposed by the Chairman of the Committee on the ground that expenditures should not be made for such purposes unless the stockmen were required to pay what the pasturage was worth, but finally it was adopted upon a tally vote of 61 for and 57 against, and included in the bill.

CONGRESS DISCUSSES THE GRAZING FEE (Cont.)

During the hearing before the Committee on Agriculture the Forester suggested the advisability of Members visiting the National Forests this summer in order that they might see personally something of the work being done by the Forest Service and secure direct from the people additional information about the problems in which the Committee is most interested. On the floor of the House a similar suggestion was made by the majority leader and it is hoped that at least a few of the Members will plan to visit some of the National Forests at the conclusion of the present session of Congress.

The policy established by Secretary Houston in his letter of February 1, 1917, to the secretaries of the American National Livestock Association and the National Wool Growers' Association, "that the timber, grazing, water power, and other resources, which are used for commercial purposes, should be charged for at a rate which represents their fair value" is in direct harmony with the policy advocated by the Committee on Agriculture, and the only difference of opinion is in regard to when the next readjustment of the rates charged for grazing should be made. The majority of the Committee believes that the readjustment should be made now and the stockmen required to pay higher rates, and I believe that we have handled the matter in the right way and in accordance with our promise should continue the existing rates until the end of the five-year period.

A. F. POTTER.

New Entrance Salary for Forest Assistants

The entrance salary for the position of forest assistant has been raised. It will range from $1,500 to $1,800. The expectation is that appointments will as a rule be made at the minimum, and that only in special cases will the maximum entrance salary be paid. The Secretary has approved the change to be effective with all future appointments. The new entrance salary is an improvement over the present rate of $1,100 and over those of $900 and $1,000 paid in the old days.

National Forest Receipts

Receipts for the period from July 1, 1919, to January 31, 1920, totaled $1,418,144.18 as against $1,111,321,21 for the same period of the present fiscal year. This is an increase of $306,822.97.

Timber sales show the largest increase--$271,175.42. Water power comes next with $17,450.54, followed by special uses-- $7,600.61, and grazing--$7,022.32. Every district except 3 has an increase in the total receipts to its credit.

At that District 3 is but $3,091.15 behind of last year's receipts for the period and will, without doubt, come into the band wagon as soon as grazing receipts are collected.

The rank of the districts in the four largest divisions of receipts is as follows:

Timber Sales	
District 6	$244,856.48
District 5	224,070.18
District 1	198,530.64
District 2	181,430.65
District 3	112,032.05
District 7	100,958.46
District 4	47,382.88

Water Power	
District 5	$36,368.06
District 1	13,924.83
District 4	10,082.58
District 6	6,656.86
District 2	2,565.59
District 3	115.00
District 7	5.00

Special Uses	
District 5	30,556.09
District 3	27,098.00
District 2	17,851.32
District 1	9,634.81
District 6	7,778.60
District 4	4,933.41
District 7	4,263.03

Grazing	
District 3	35,353.55
District 4	14,866.49
District 2	12,985.47
District 1	9,054.04
District 5	6,130.92
District 6	3,617.62
District 7	1,998.16

Washington Notes

Albert Morris, fiscal agent at Albuquerque, is in Washington for a brief detail in connection with work of his office. Mr. Morris, is also making the best of his opportunities to renew his old friendships and tell us of the good points of District 3.

District 1 - Northern District

It has become almost a universal practice in District 1 to speak of the Eastern grazing Forests and to lose sight of the fact that there is also a Western grazing Forest -- the Nezperce.

The following tabulation which gives an idea of the amount of grazing business handled on the Nezperce, as compared with two of the larger grazing Forests in the District, may be found interesting as well as informative.

Forest	Number C & H	Number S & G	Number Cow Months 5 sheep = 1 cow
Beaverhead	30,500	180,000	351,820
Madison	30,000	137,000	256,700
Nezperce	14,900	115,500	193,455

The Nezperce would appreciate hearing from some of the other Forests.

The other day a solicitor for one of the large Montana daily newspapers, who apparently was unable to read the "No Soliciting" sign on the office door, forced his way into the office of Supervisor Burr W. Clark. He inquired for, and solicited a subscription from Mr. Clark. After Mr. Clark had turned him down he inquired if Mr. Lewis was in. It was explained to him after the office force had recovered their composure, that the Lewis & Clark was a National Forest and not a private forest operated by Messrs. Lewis & Clark, and that Mr. Lewis had left this region and had gone to his reward some little time ago.

The classification of agricultural lands within the Forests as provided for by the Act of August 10, 1912, is now complete in District One.

The work was first undertaken as project work during the fall of 1912. The first project of consequence involved the agricultural lands along Priest River Valley, within the Kaniksu National Forest in northern Idaho. Project work was continued during 1913 and 1914, when the Moyie and Kootenai valleys in the Pend Oreille National Forest in Idaho and the Fortine, Swan Valley, North Fork of the Flathead, and Custer projects in Montana were intensively examined and reported on.

The work was reorganized and undertaken on a broad scale during 1914, when all of the Forest areas within the District were examined and the character of the land indicated in three general classes on map sheets. These classes included: first, land too rough and stony, or land otherwise unsuited for agriculture; second, land topographically suited to agriculture, and with other agricultural characteristics, but covered with heavy stands of merchantable timber; and third, lands seemingly of an agricultural character but which were left for final and intensive classification before definite recommendations were made either for or against listing. The first phase of the work coming under the reorganization required nearly two and one-half years to complete. This work was known as extensive classification and had for its object the classification and mapping of rough, purely forest or grazing land. The second phase, known as intensive classification, had for its purpose the final classification and segregation of all the areas coming under classes two and three.

The intensive examination was begun on each Forest as rapidly as the extensive classification was finished. Since the work was intended to be a final classification, and in order that mistakes be avoided, a highly trained expert with broad experience was detailed to the survey by the United States Bureau of Soils at the request of the Forest Service, and was constantly in touch with the work while it was actively in progress.

District 1 - Northern District (Continued)

The total area within the National Forests of District One is 26,645,848 acres. Of this area 4,163,668 acres are alienated, leaving a net area of 22,482,180 acres of National Forest land. Of the net area 22,122,987 acres were permanently classified and segregated as nonlistable as a result of the extensive classification, being too rough and stony, or otherwise unsuited for agricultural purposes, and 359,193 acres were left for intensive classification and were covered by final survey. Of this total 42,275 acres were found to be chiefly valuable for agriculture and have since been listed and entered, or entry is pending. The remaining 316,918 acres were found to be entirely unsuited for agricultural purposes and have since been permanently classified as chiefly valuable for National Forest purposes.

The classification so thoroughly combed the National Forests of the District for listable agricultural lands that there are practically none remaining that are not covered with some kind of a claim or entry.

It is estimated that the 1919 fires have increased sevenfold the acreage in need of reforestation in District 1. In 1916 it was estimated from reports submitted by the Supervisors, that a million acres were in need of reforestation. Based on data obtained by the 1916 Planting survey crew, this estimate was cut to 300,000 acres. From data obtained in the 1917 and 1919 surveys, this estimate was further reduced to 100,000 acres. The class C burns in 1919 covered approximately 1,300,000 acres of forest land. About 25% of this area consisted of second and third burns, many of which had been classified as having sufficient reproduction. Another 25% in addition to the above will perhaps need reforestation, thus bringing the total acreage in the District in need of reforestation to approximately 750,000 acres. About half of this area lies in that part of the white pine region consisting of the Cabinet, Clearwater, Coeur d' Alene, Kaniksu, Lolo, Pend Oreille, and St. Joe Forests.

During the 1916, 1917 and 1919 seasons the planting survey crew has mapped 69,000 acres on an intensive scale and has examined 315,000 acres extensively. This work has been confined to the Cabinet, Coeur d' Alene, Lolo, Pend Oreille, and St. Joe Forests. It will gradually be extended to three or four other Forests in the white pine belt.

District 2 - Rocky Mountain District

Deputy Supervisor, C. L. Cecil of the Black Hills Forest resigns March 1 to accept a position with a lumber company in Minnesota at a very attractive salary.

Miss Gertrude L. Kimmel, who has been mail clerk and assistant to the Chief of Maintenance in the Denver office, has been transferred to the local land office. Miss Kimmel has been a member of the Forest Service since 1908, first in Lands in the Washington office and since the organization of the districts she has been in Denver. Miss Kimmel leaves behind her in the Service a record of very valuable services. Her transfer is a cause for regret to the Service and the land office is to be complimented.

District 3 - Southwestern District

The Santa Rita Range Reserve, the range experimental pasture in southern Arizona, in charge of Grazing Examiner Hill, was the scene of a "stock show" some time ago. The show was coincident with the meeting of the ranger force of the Coronado Forest held at the Range Reserve.

The stockmen entered into the spirit of the show with considerable friendly rivalry and much enthusiasm. Everyone was anxious to win "first mention" for the exhibit.

Two members of the faculty of the University of Arizona, connected with the Animal Husbandry Department, attended the meeting and judged the stock. An entire afternoon was given over to stock judging and the discussion of various livestock subjects under the direction of the professors from the University. The animals exhibited were used for demonstration and judging purposes.

The rangers in attendance feel that they picked up much valuable information from the exhibit and stock judging. Each Forest officer was furnished a score card similar to those used at the University and was asked to fill it out on the basis of his own judgment.

The show was a success and everybody went home happy.

District 3 - Southwestern District (Continued)

A stag dinner at the Country Club was the wind-up to the Supervisors' Meeting in Albuquerque. Supervisor Mullen acted as toastmaster and lived up to his reputation.

Forest Supervisors in New Mexico will be appointed public health inspectors by Dr. C. E. Waller, State Health Commissioner, on the basis of a co-operative agreement that has been made. Legal authority of the commission will now be available for Forest officers in promoting sanitation on the Forests in New Mexico.

The Arizona State Forestry Association was formed at Tusson recently. Supervisor H. B. Wales of the Coronado Forest, who took an active part in the organization of the association, was elected a member of the executive committee.

Earl W. Loveridge goes to the Carson Forest succeeding Forest Supervisor Guthrie, who has been transferred to the District office at Portland. Mr. Loveridge has been deputy on the Santa Fe since 1916. Lee R. DeCamp goes to the Santa Fe as deputy.

John D. Jones has been appointed Assistant District Forester in charge of the Branch of Lands in this District. Mr. Jones was formerly assistant in Lands in District 1, and for several years past has been in charge of the land classification work in the Washington office. Mr. Jones is expected to arrive at Albuquerque about March 1. He is not a stranger in the District as he spent about three months on the Coconino, Tusayan, and Sitgreaves Forests about three years ago.

National Forest Examiner Frank E. Andrews has been promoted to District Forest Inspector, and will be placed in charge of the Santa Fe Forest, as well as having duties of general inspection on certain other Forests. From November 1, 1909, to July 1, 1914, Mr. Andrews was Supervisor of the Jemez Forest, so that his new assignment will carry him to familiar work.

Forest Supervisor Joseph C. Kircher of the Santa Fe has been promoted to District Forest Inspector, and transferred to the District Office where he will have charge of fire protection throughout the District, including fire studies, equipment, and plans, and do general inspection work. Prior to his service as Supervisor of the Santa Fe, Mr. Kircher had extensive experience in the office of Silviculture and on the Coconino Forest.

Forest Supervisor James F. Mullen, of the Manzano, has been promoted and assigned to Operation, where he will be engaged in the inspection and general administration work conducted by that branch.

Forest Supervisor T. T. Swift, of the Crook Forest, has been promoted to District Forest Inspector. In addition to his present duties of Supervisor, he will take charge of mineral examination work throughout the District.

The Personnel Rating Committee that was appointed at the Supervisors' meeting a year ago has recommended to the District Forester the adoption of a rating system analogous to that used in the Army. The committee's recommendation is based on a year's experiment with this method on Four Forests of this District.

Charles L. Rak, formerly Deputy Forest Supervisor on the Coronado, has been elected President of the South Chiricahua Cattlemen's Association.

Forest Supervisor Edward P. Ancona, assistant in Operation, has been assigned as assistant in Information and Fish & Game Studies. Mr. Ancona, just back from the East, saw the first run of the Santa Fe motion picture films taken on and near the Santa Fe Forest last summer by Mr. Goergens, Department photographer. Without the titles the pictures fill seven reels, and are pronounced by Mr. Ancona to be admirable in every sense. They probably will be shown in this District soon.

District 4 - Intermountain District

Three of the cattle and horse growers' associations which operate on the Weiser Forest, held their annual meeting during the week of January 19, to 24. The Ogden Office of Grazing was represented at these meetings by Grazing Examiner D. A. Shoemaker. The Hitt Mountain Association held their meeting at Weiser on the 20th. The Indian Valley Association held theirs at Indian Valley on the 21st and the Council Valley Association at Council on the 23rd. The meeting which was to have been held with another of the Associations at Cambridge was postponed on account of an epidemic of Influenza, which had resulted in the closing of schools, churches, theatres, etc., and the prohibiting of public gatherings of any sort in and around Cambridge.

A good attendance was had at each of these meetings and the information given regarding National Forest grazing matters apparently was appreciated and quite favorably received.

Mr. Shoemaker's talk covered several phases of range management, including, first, a discussion as to the determination of the class of stock to which a range is best suited, based on the nature of the forage, the topography, stock-watering places, animal pests, and the protection of timber reproduction; second, the determination of the proper grazing seasons for given units, with full explanation as to premature grazing, including the detrimental results, and why grazing before the vegetation has reached a certain stage of development brings about these results.

In this connection, Dr. Sampson's plant vigor experiment was explained to indicate the effect of early grazing, and more so, those of repeated croppings throughout the growing season, on the amount of forage production, the vigor, longevity and perpetuation of the plants on the range. The question of "Zones of Vegetation" with the proper grazing seasons for each was also discussed. It was shown that very beneficial results could be secured by so handling the cattle that they would be confined to a given zone during the period which the vegetation in the zone should be grazed in order to get the greatest forage production, and at the same time secure full utilization. Third, the proper numbers of stock that should graze given areas and how it is determined by intensive range reconnaissance. Overgrazing was defined and quite a detailed discussion given of the indicators of overgrazing. It was pointed out how overgrazing results from premature grazing, overstocking, poor watering facilities, poor distribution of stock and poor handling of stock; also how the stock and ranges could be handled to overcome these causes. It was shown that the control of the numbers of stock actually grazed was very important, since if the numbers actually grazed could not be controlled, even the most ideal grazing plan would be defeated. Fourth, a discussion was given of some of the methods of handling the cattle on the range which tend to bring about the desired production of forage and its uniform utilization.

Proper salting methods were discussed, pointing out the contrast of the old method of putting salt where the cattle were with the new of putting salt where the feed is, and the beneficial results of the latter method in the way of more uniform utilization of the forage and a tendency to eliminate localized overgrazing. It was also shown how the proper placing of salt on the range tends to confine the cattle to the different elevations during which time these elevations should be grazed. It was shown that proper salting could not be expected to do all that is necessary to control the movements of cattle, but that salting needs to be supplemented by herding, fencing, or in some cases, by both herding and fencing. Fifth, a discussion of the revegetation of depleted ranges was given, with an explanation of the deferred and rotation grazing system, including the fundamental facts on which this system is based, how it is applied to sheep allotments and may be applied to cattle allotments, and the results from practicing this system.

A number of ways were shown how the associations could work to secure better management of their stock and ranges, and also how they may cooperate with the Service in carrying out their plans. The stockmen were told that the Service was very anxious to cooperate with them to the fullest possible extent in any plan for better range management. In this connection, the subject of "special rules" was taken up, showing the large field that special rules may cover in securing the cooperation of every permittee using an allotment in putting into effect any plan or constructing and maintaining any range improvements which would result in better range conditions, or would facilitate the handling of the stock on the range.

The question of trespassing by unpermitted stock was also discussed, showing not only the detrimental results to the range but also how the grazing of unpermitted stock directly affects the permittees using the allotments. It was explained that one unpermitted animal took the feed to which the permittees were entitled and which was worth some five to six dollars to the permittee. While the stockmen were losing five to six dollars worth of feed with every unpermitted cow grazed, the Service was losing only the 72 cents grazing fee. After pointing out why the permittees should probably be fully as interested in controlling the grazing of unpermitted stock as is the Service, their cooperation was asked in assisting the Service to do whatever seemed most practical to check this grazing by unpermitted stock.

At the meeting of the Hitt Mountain Cattle & Horse Growers' Assn., at Weiser, the members present voted to postpone the opening date of the grazing season from May 1 to May 15.

The Indian Valley Cattle & Horse Growers' Assn. passed a resolution asking that a range reconnaissance be made of their district as soon as possible for the purpose of determining the proper date for the opening of the grazing season, and the class of stock to which the range on their district is best suited.

The Fishlake Forest in Central Utah claims credit for the organization of the Utah Cattle & Horse Growers' Association, the members of which recently met in Salt Lake City and perfected a permanent organization. The question of forming an association of the cattle growers of the State of Utah was first taken up in the Annual Allotment meeting of the Advisory Boards for the cattle associations on the Fishlake Forest in Salina on February 8, 1918. At that meeting, Messrs. C. T. Scorup and R. B. Evans of Salina, and Soren Anderson of Centerfield, were appointed a special committee to endeavor to get the cattle and horse permittees of the State to form an association. It was largely through the efforts of these gentlemen, with Thomas Redmond of the Utah State Livestock Board, that the organization of the cattlegrowers was finally effected.

Moab, Utah, the headquarters of the La Sal Forest in southeastern Utah, is experiencing an oil boom. Supervisor DeMoisy of the La Sal advises members of the District Office not to visit Moab at the present time on a per diem expense basis. On account of the recent oil strike, the price of meals and lodging has doubled, and accommodations have been taxed to the utmost. Because of the strike, land values have increased from 50 to 100%, and there has been a wild scramble for oil leases and claims. Reports that have gone out as to the quantity of oil discovered have been greatly exaggerated, but oil of a very high quality has unquestionably been found. The amount of oil and the extent of the field remain to be shown. The boom has temporarily subsided awaiting the arrival of rigs and equipment for sinking several wells in the valley. The piece of land formerly owned by S. B. Locke, now of the District Office at Ogden, is being sought at 50% more than the price it is understood he received, with one-half the oil rights reserved. The news of the oil strike at Moab was broken to Locke a few days ago, and he has been far from well since.

The termination of all large scale planting work in District 4, after completion of planting this coming spring, was recently approved by the Forester. This also means that Cottonwood Nursery, the last remaining nursery in the District, will soon be closed.

The decision was based largely on two facts: (1) The plantable acreage in the District is not nearly as large as originally estimated (2) The cost of doing the work successfully, under the adverse conditions existing here, is so great that it appears best for the present at least, to transfer our energies to other Districts where the need is more urgent and results secured per dollar expended, far greater.

Due to discouraging results secured from planting on sage, oakbrush and aspen sites, work on this class of areas was given up sometime ago. This phase of planting will never be resumed unless research work shows beyond all possibility of doubt how and where the planting can be successfully done and sufficient evidence is obtained, through aspen management and other studies, to indicate conclusively that these areas will be of enough greater value when changed to a coniferous type, to warrant the expense of planting.

All planting has been confined the last few seasons to burns in the natural coniferous type. Reconnaissance work carried on recently, indicates a rather surprising lack of such burns on which natural reproduction is entirely lacking, as the following figures covering 1918 work will show:

Burned acreage examined................	17,345
Acreage restocking very well...........	11,975
Acreage restocking sufficiently so that planting is not justified.....	4,860
Acreage in need of planting............	510

Besides showing that the plantable acreage is extremely small, these figures also point out that there is in the District a large acreage on which reproduction is sufficient to make planting inadvisable, but too scant to produce for years to come the yields which these sites are capable of growing. Timber conditions throughout the country are becoming such that we can no longer disregard this phase of our silvical work and leave our burns entirely to the whims of nature, but must watch them closely and carefully, and whenever it is found nature is not caring for them properly, assist and help in every way possible.

It may be necessary to restrict grazing for a period of years or to graze an area very heavily immediately before or after a good seed year, or to graze it normally until the small amount of reproduction there at present has reached seed-bearing age, and then close it. But whatever measures are necessary there must be no hesitation to put them into practice and bring these burns back to their maximum production as soon as possible.

Two contractors at Ogden contemplate building 100 houses on lots owned by them. They called at the district office recently and stated their wants. The contractors expect to erect a sawmill and a lath mill to get away from the high cost of lumber, and want a logging chance of 6,000,000 feet reasonably near to Ogden.

A decision from the Comptroller in the case of an official who left his headquarters at 6:25 P.M. returning at 7:30 A.M., who made claim for both dinner and breakfast while enroute, states that both these meals might have been taken at his post of duty, and for that reason, the Disbursing Agent was not warranted in making payment therefor. In connection, the Comptroller further makes the following statement:

"The purpose in reimbursing officers or employees for expenditures made in connection with travel performed is to make good the increased expense to which such officers or employees are put by reason of travel performed in the interest of the Government. Where expenditures are not a legitimate incident of the travel the reason for reimbursement does not exist. It is upon this hypothesis that reimbursement is refused for meals taken enroute which should have been taken before leaving the post of duty or subsequent to arrival thereat."

(Repetition see page 8)

The Fishlake Forest claims credit for the organization of the Utah Cattle & Horse Growers' Association, the members of which recently met in Salt Lake City and perfected a permanent organization. The question of forming an association of the cattlegrowers of the State was first taken up in the Annual Allotment Meeting of the Advisory Boards of the cattle associations of the Fishlake Forest in Salina on February 8, 1918. At that meeting Messrs. T.C. Scorup and R. B. Evans of Salina, and Soren Anderson of Centerfield were appointed a special committee to endeavor to get the cattle and horse permittees of the State to form an association. It was largely through the efforts of these gentlemen, with Thomas Redmond of the Utah State Livestock Board that the organization of the cattlegrowers was finally effected.

Farmers in the vicinity of Three Creek, Idaho, have raised $1,000 as their share of the fund to be used in the extermination of jack rabbits on their side of the Humboldt Forest. The Biological Survey has cooperated with the farmers in this campaign, and the work of extermination will begin early in the spring of 1920.

An example of prompt and effective action in the windup of a trespass case on the Humboldt Forest occurred recently. On January 3 the Supervisor received a report of an innocent trespass committed by Sylvain Siard. On the same day notification was sent to the trespasser, from whom a reply was received on January 10. On January 13 demand was made for actual damages to the amount of $76.23 and on January 20 this amount was remitted to the First National Bank of Ogden.

Timber sale activity seems probable on the Weiser Forest. Recently there have been requests for information regarding the timber on the Pole Creek and Johnson Creek areas. Prospects indicate a sale of the Pole Creek chance, which is estimated to run a little over 14 million feet.

The Challis Forest reports quite a heavy movement of cattle during the past month, and feed yard counts indicate that in all probability there will be a falling off in permitted stock on some parts of the Forest. No effort will be made to fill up any range not used by bringing in outside stock, because last year was a bad season and the range will be greatly benefited by a year's rest.

The flu situation is rather bad in the valleys adjacent to the Caribou Forest and a number of deaths have occurred. So far none of the Forest force has been afflicted, but Ranger Gordon has been called on to nurse the sick, to break roads for the doctor, and in some cases to get the doctor. Miss Standing has also been out nursing the sick.

On returning to Georgetown from Montpelier some time ago Ranger Gordon met two well-known Montpelier nimrods homeward bound. He felt that they might have some contraband in their sleigh, so he hired a horse from a neighbor and started in pursuit. The sleigh was drawn by spirited horses and Ranger Gordon had a long chase, but finally overtook the suspects. After searching the sleigh he was forced to admit that the laugh was on him for he found nothing to bring the owners in conflict with the game laws.

District 6 - North Pacific District

Forest Supervisors Sherrard, Weigle, Brundage, Fromme, and Evans have been appointed District Forest Inspectors in line with the recently approved reorganization plans. This change is to meet in this district the growing needs of the Service and partly to offset by more frequent inspections the loss in efficiency caused by the numerous changes in the personnel through resignations.

Messrs. Sherrard and Brundage will be engaged principally on inspection of fire protection plans and will assist in raising them to a higher state of effectiveness.

Mr. Weigle's first duty will be to examine all existing data which the various forests have gathered with reference to the pulp resources of the Puget Sound region, and prepare a working plan.

Mr. Evans will assist the east side Supervisors in preparing inter-forest working plans with which to handle the yellow pine situation. Mr. Fromme will give his attention to the uniform carrying out of the Department's policies with reference to the use of the National Forests for grazing and recreational purposes which include game and fish propagation and protection.

These inspectors will be known as the Section of Working Plans to the District Office. Until more definite arrangements are made, the Oregon Forest will be in charge of Carl B. Neal; the Columbia in charge of Shirley Buck; the Snoqualmie in charge of Lewis A. Treen; the Olympic in charge of O. F. Ericson, and the Whitman and Minam in charge of J. F. Irwin.

Supervisor S. C. Bartrum of the Umpqua Forest has resigned to become Pacific representative for a life insurance company. Mr. Bartrum has to his credit more than twenty years of continuous service. His first appointment was that of ranger on the Cascade Forest Reserve under the Interior Department. Later he became Supervisor. With the increase in the intensity of administration the original Cascade Reserve was divided from time to time into smaller units. At the time of his resignation Mr. Bartrum was Supervisor of the Umpqua, which is a slice of the original Cascade Reserve and so he has to his credit an unbroken record of service on the same Forest.

Payment of $175 in fines and $184.34 civil damages is the outcome of the case against a pioneer stockman of Washington for allowing stock not exempt from permit to graze on the Colville Forest without permit. This case has been followed with interest by stock raisers holding annual permits and needing protection from invasion of unpermitted stock on their allotments and by those who desired to learn if the United States can collect fees for stock which by accident drift unpermitted on Forest range. Criminal proceedings against the trespasser were instituted April 7, 1919. The case was set for September 2, but postponed on a showing that the absence of a material witness was unavoidable. Meanwhile the trespasser's stock continued to trespass and the Forest Service filed a second action against him and appeared with witnesses January 6. Defendant appeared without attorney or witnesses and pleaded guilty to both charges. He was fined $75 for the first and $100 for the second offense.

During the 1920 road-building campaign District 6 will make strong efforts to preserve roadside strips of scenic importance from cutting, and endeavor to secure privately owned lands bordering highways through exchanges in order to safeguard them from logging operations. Camp-ground sites, summer home sites, etc., are to be included in the protection given roadside strips, and effort is to be made to secure areas specially suited for such sites from private ownership by mutually advantageous exchanges. The District Forester will cooperate with all road-building agencies operating in or near the Forests or controlling rights of way, with commercial clubs, county courts, and wherever else possible, in securing preservation of trees along roads through private lands and logging operations as well as inside the Forests during the road-building campaign about to begin. As one means of obtaining full cooperation from the Forest officers of the District, they have been given the principles which should govern all timber cutting, road building, and similar work, from the standpoint of preservation of shade, scenery, etc.

The juniper of central Oregon, where the Deschutes Forest is located, is now recognized as an acceptable substitute for red cedar in the manufacture of pencils and other small articles. The Juniper Products Company is constructing a plant at Bend and has already contracted for a supply of juniper. Also juniper to supply a Seattle firm is being logged between Deschutes and Tumalo.

A house built entirely of Douglas fir, Sitka spruce, western hemlock, and red cedar grown in Oregon and Washington will be the center of attraction at the forthcoming exhibit of the "own-your-home" exposition in New York City.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

February 24, 1920.

Major Pullman

Major Raymond W. Pullman, Chief of Police of the District of Columbia since 1915, and formerly in charge of Information in the Forest Service, succumbed to pneumonia on February 22, after an eight-day illness. His death cuts off almost at the outset of the career which might fairly have been expected for him one who had already gone far, and to whom the Forest Service recognizes an enduring debt of obligation. Only 37 years old, he was a man of still developing powers, of already eminent services, of unswerving loyalty to high purpose, and of a personality as attractive as it was forceful and energetic.

The Forest Service loses in him not only an ex-member always keenly interested in its progress but also a graduate who carried into other fields ideals of public service that had found early and valuable expression in his work with us. At the time of his appointment, May 1, 1907, he was a young but capable newspaper reporter on the staff of the Washington Post. Up to that time there had been almost no provision in the Forest Service for supplying information to the press, but on account of the growing importance of forestry and public interest in the subject there was great need for it. This need Pullman supplied, with extraordinary success.

His resignation from the Forest Service was on January 25, 1910, a few days after the retirement of Mr. Pinchot. Very few men in less than three years of actual connection with the Service have equalled his record of accomplishment. He was in truth a pioneer in the field of Governmental publicity. With combined resourcefulness and level-headed judgment he built up the work along lines which were effective without overstepping the limits of the most rigid official propriety. When he left, the information furnished by the Forest Service was being eagerly used by the newspaper press of the entire country, to an extent which never before had been thought possible, and never since has been equalled.

Between the time of his resignation from the Forest Service and his appointment as Chief of Police of the District of Columbia, Pullman was engaged in newspaper work on his own account, but always with a strong interest in activities having to do with social problems and promising social betterment. In short, he was a progressive with a small "p". Then came the time when the Commissioners of the District of Columbia sought a man who would infuse the police force with ideals of usefulness abreast of the best thought of the times. Pullman was, under the circumstances, a natural choice.

The choice was nevertheless an unusual one. Not only his youth and lack of practical police experience but lack of experience in any administrative field led many to question the wisdom of his appointment. Most emphatically, however, he made good. Although the war brought difficult problems and the most strenuous toil, his handling of the police force gained for him praise of the highest order from those best fitted to judge impartially. He was one of the most efficient heads of a police department in the country, wise and strong in handling men, fearless and devoted in the discharge of his duties, and showing broad vision in his conception of a police force as an instrumentality for varied public service.

His early death brings to an untimely end a career of large fulfilment, and still greater promise. To those who knew and worked with him in the Forest Service it brings a keen sense of personal loss, as well as a sense of the public loss.

HERBERT A. SMITH.

Ringland is on the Job

Captain Arthur C. Ringland has made himself so indispensable in the relief work in Czecho-Slovakia that the Forester has granted a further extension of his leave. In making the request Walter Lyman Brown, Director for Europe, for the American Relief Administration European Children's Fund, had the following to say:

"We cannot thank you too much for your kindness in having extended Ringland's leave when we have before requested it, but I cannot refrain from again adding my own request to this last application. Ringland is doing a fine piece of work in a fine fashion. He is making good in every particular, has the love and confidence of the Czechs, and should remain on the job until the finish if at all possible.

The only point on which I take issue with him is as to the date of completion, as it now looks as though our American assistance must continue until the harvest. This is also the opinion of Mr. Hoover. I would, therefore, rather see the date 1st September than the 1st July.

I am attaching, for your information and possible interest, copy of a letter which I have received from the Czech Government, signed by the Food Minister, the Minister of Social Welfare and Dr. Alice Masaryk, daughter of the President. This is a tribute which is only Ringland's due, and I have pleasure in sending it to you for that reason."

The letter referred to by Mr. Brown follows:

CESKOVENSKA PECE O DITE.
Praha II. Narodni tr. 14.

PRAGUE, November 15th, 1919.

MR. WALTER L. BROWN,
Director for Europe,
American Relief Administration European Children's Fund,
12, Grosvenor Gardens,
LONDON, S.W.1

Dear Sir,

The American nation has saved about half a million Czecho-Slovakian children from the starvation in the most critical time before the harvest 1919.

The wise and farseeing policy of American Relief Administration European Children's Fund decided to continue the feeding of equal number of our neediest children till June 1920 and if the resources permit until the next harvest.

The national organization of the "Cezkoslovenska Pece o dite," with the President of the Republic as head and all Ministers of the Cabinet as Members of the National Committee is distributing the American food to the remotest districts and places of our country.

The soul of this organization, unique in the history of our nation, is MR. ARTHUR C. RINGLAND one of those excellent workers whom you have sent to Europe to accomplish your wonderful plan to help small nations and enable them to face the consequences of war.

Under Mr. Ringland's guidance our organization, in friendly cooperation with other great humanitarian organizations and societies, is approaching now to its completion not only in Bohemia, Moravia and Silesia, but also in Slovakia, where through the Magyar invasion in summer our work has been interrupted.

Your generous gift of additional quantities of food to secure still better nourishment for our children, the announced most valuable gift of clothing and boots to protect our children against snow and frost, as well as the perfection of our organization, which we hope will form a solid basis for all our social work in the days to come, make a prolonged stay of Mr. Ringland, in whom we have full confidence, most desirable.

We venture to suggest therefore not to call Mr. Ringland back at the end of this year, but to prolong, if possible, his stay in our country at least to March, 1920, to enable him thus to enjoy fully the fruit of his strenuous and splendid work to our benefit and your satisfaction.

In pleasant and vivid recollection of your visit in Prague,

We are, dear Sir,
Yours very truly,

(Signed) HONDEK
Food Minister
Member of the Nat. Com.
"Ces. Pece o dite"

(Signed) DR. MASARYK
President of the Nat.
Committee "Ces. Pece
o dite"

(Sig.) DR.WINTER
Minister of Social Welfare.
Member of the
Nat. Com. of the
"Ces. Pece o
dite."

A Ten Thousand Dollar Gift

The National Research Council has received a gift from the Southern Pine Association of $10,000 to pay for the incidental expenses of a coordinated scientific study by a number of investigators of the regrowth of trees on cut-over forest lands, with the aim of determining the best forestry methods for obtaining the highest productivity. This gift is the direct outgrowth of a resolution adopted at the Second Southern Forestry Congress held at New Orleans last month, in which recognition was made of the importance of scientific research and the value of close cooperation in work of such fundamental character which included the pledge of support.

A Forestry Bill in Mississippi

The establishment of a Board of Forestry in the State of Mississippi is provided by a bill just introduced in the legislature. The main provisions of the bill are the appointment of a state forester, proscribing his qualifications, providing for a system of forest protection, management, and replacement, and for a State forestry fund by levying a license tax on the amount of timber cut.

A Visit to the Bureau of Standards

Opportunity to see some of the activities of the Bureau of Standards was given at an open house gathering held at the Bureau on February 17, 1920. About 200 persons were present.

The main program was opened by an address of welcome by S. W. Stratton, Director of the Bureau, who outlined briefly the history of the Bureau, its aims, and purposes, and indicated how similar research work was carried on in other countries.

After a run of motion pictures showing various phases of the work that is being done, a demonstration of the Properties of Liquid Air and the Radio Direction Finder was made. Then the guests separated into groups of 25 and under the guidance of members of the Bureau were taken through many of the laboratories.

The most interesting demonstration was that of the radio telephone. Messages of all kinds interspersed with some jazz were sent out and opportunity given to each group to gather around a portable receiving instrument and pick up the messages that were sent out. The portable receiving set was about the size of a small suitcase and readily carried from room to room.

Previous to the regular program of the evening a compression test was made with the 2,300,000 pound Emery hydraulic testing machine. The meeting was brought about through the efforts of the scientific-technical section of the Federal Employees Union No. 2 and is a part of the program to get the scientific and technical personnel in the Washington bureaus acquainted with each other and familiar with activities of the various bureaus.

Some Resolutions

Resolutions adopted by the Second Southern Forestry Congress held at New Orleans from January 28 to 30, 1920, inclusive, cover a wide range of subjects. No definite policy was outlined by the Congress, but the resolutions give an idea of what the Congress stands for. The committee which drew up and endorsed these resolutions was composed of foresters, lumbermen, and manufacturers, and the Congress which endorsed the resolutions comprised delegates representing practically all interests concerned in the growth and manufacture of timber.

The resolutions urged the enactment of legislation which will require or make possible the adoption of measures by owners that will prevent denudation and afford an opportunity for a natural replacement of forest growth; the leaving of sufficient seed trees to restock cut-over lands; the enactment of special tax legislation relating to forests, based on the separation of land and timber values, the deferment of taxes on timber until harvested, and special tax relief on properties devoted to timber growing; the organization of strong non-political forestry departments and the appropriation of adequate funds for their effective maintenance; to study particularly the forestry* of the South; the purchase by the Southern States of areas for State forest purposes; the endorsement and support of the projects of the National Research Council in regard to forestry; the appropriation of two million dollars during the next five years for the purchase of forest lands under the Weeks Law; the increase of the appropriation to $200,000 for Federal cooperation under the Weeks Law; the establishment of a forest experiment station in the Southern Pineries and in the southern Appalachians.

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*problems

District 1 - Northern District

Special use permits in this district total 2,295, of which 1,267 are free permits and 1,028 charge permits. Permits have been issued for golf links, a quarry, a park, a smelter, a charcoal kiln, a shooting gallery, a mineral spring, an amusement hall, a jail, cabins, cemeteries, corrals, dams for various purposes, drift fences, roads, bridges, sawmills, school houses, stock tanks, private telephone lines, irrigation and water power ditches, flumes and pipe lines, garages, stables, fish hatcheries, hotels and road houses, residences, resorts and club houses, stores, and wild hay cutting.

All bids received for the 60 million feet of timber on the Callahan Creek Chance on the Kootenai Forest have been rejected for administrative reasons. The Bonners Ferry Lumber Company bid $4.10 per M for the white pine and the Sandpoint Lumber & Pole Company bid $3.50 per M. Both bids were the minimum price on all the other species.

The timber will be readvertised and the new advertisement makes the acceptance of bids conditional on the erection of a mill to saw this timber in the western portion of the Kootenai Forest. The erection of a mill in the western portion of the Kootenai will be of great assistance in regulating the cut and will probably serve as a basis for the establishment of a working circle which will include the country and south of Troy.

District 2 - Rocky Mountain District

A petition has been received from 16 stockmen, most of whom use the Ryman Creek block on the north side of the Montezuma Forest, asking that the Service refuse to consider eliminating that area. The type is pinon and juniper, offers very little value for timber production and the watershed value is also low so that there has been consideration of using it as trading stock in land exchanges. The stockmen make the point that the range is very important because it is available for early and late use when the Forest ranges are not open, and urge that this value is important enough to warrant its retention in the Forest. The petition brings out the degree of satisfaction with which the stockmen view the administration of grazing lands by the Forest Service.

Carlos G. Bates, silviculturist, in charge of the Fremont Experiment Station, has been allowed a patent for an improvement in evaporimeters or atmometers.

Under the title "A New Evaporimeter for Use in Forest Studies," an article by Mr. Bates, describing the construction, behavior and operation of this new evaporimeter or atmometer, appeared in the May 1919 issue of the "Monthly Weather Review." This article treats of the subject of evaporation or transpiration from plants, of the factors which influence it and of the conditions which must be met before water-losses from plants can be approximately determined through instrumental evaporation.

During 1919, 584.2 acres were planted on the Pike Forest at a cost of $16.03 per acre. An average of 714 trees per acre were planted with an average cost of $4.75 for trees.

The average per cent of survival at the close of the season is about 93%. To date, 5,487 acres have been planted on the Pike of which 88% are successful. Prior to 1911, 4,802 acres were seeded and it is estimated that only about 1% of this has a stand of seedlings on it as a result of this sowing.

Applications for positions on grazing reconnaissance parties or for temporary work in other activities in connection with the handling of grazing have been received from considerably more applicants during this winter than at any time for the same period during the past two or three years. Whether this is due to a greater inclination on the part of students to apply for grazing work, or whether it is merely the result of getting back to a normal demand for temporary positions after the interference of war conditions, is difficult to say. It at least seems certain that the usual difficulty of getting satisfactory temporary help for grazing reconnaissance and grazing investigations will not be encountered this year.

A Forest Service Engineering Conference of District Foresters and District Engineers was held in Denver, February 9 to 15. Chief Engineer Merrill, Assistant Chief Engineer Norcross and Assistant Engineer Bonnor all of Washington D. C. were present. On February 14, a joint meeting was held with engineers from the Bureau of Public Roads which had also been holding a conference in Denver.

Under Maps and Surveys, Mr. Merrill mentioned that our work would likely decrease on account of the establishment of the National Board of Maps and Surveys, which will have charge of the correlation of all surveying and mapping by the various bureaus.

The discussion on Airplane Patrol Maps and Aerial Mapping was interesting and indicated that it will be necessary to do considerable investigati along this line before a standard map can be adopted. Mr. Osborne of Osborne Fire Finder fame was present and entered into this part of the discussion.

Naturally Roads Discussions took up the time of the conference, and our serious situation in 1921, if Congress fails to pass appropriation bills, was discussed. The consensus of opinion was that no further enlargement of the Forest Service road organization is desirable, but the present organization should be kept intact in anticipation of further appropriations by Congress. The conference indorsed the comprehensive road study and was of the opinion that in case of cooperation on a State or County road, it is desirable that construction conform to a standard at least equal to the State or County standard and that the amount of Forest cooperation should not be greater thanthe value of the project to the National Forests. Also that the Federal Government has an obligation to aid in the construction of public roads within the National Forests. So long as the Appropriation Acts require cooperation, the major projects selected may not be those of greatest importance from a purely National Forest standpoint, but the wishes of the States and Counties should be given full consideration in selection.

To decrease the danger of forest fires, clearing should be accomplish and brush disposed of before construction begins whenever practicable. After the center line of the road is located, Forest officers should designate the trees to be cut in clearing the right of way. This is to avoid any unnecessary cutting of trees which may give the road a greater recreational value as well as to save work and timber.

Recreational Engineer Carhart discussed roads chiefly necessary for recreational development and said that they should avoid long tangents and be given a more pleasing alignment; that special attention should be given to clearing in order not to mar the scenic value. Above all, the road must be pleasant to travel. The conference discussed road signs and moved to adopt a standard throughout all Districts,- moss green letters, ivory white background - directional and crossing symbols adopted by A.A.A. in the above colors - mile-posts should generally accord with the prevailing practice on the remainder of the Highway.

The desirability of coordinating road construction and maintenance with fire protection was brought out. Road logs were discussed and the desirability of obtaining data for them in connection with the work.

The waterpower portion of the program was practically omitted due to Mr. Randell's absence and the present uncertainty of proposed legislation. Mr. Merrill outlined the status of the latter.

The more important discussions were on Forest Road Standards, Locatio Survey Practice, Monthly Project Reports, Estimates and Financial Practice. Engineers Bright, Crash, Finch and Purcell of the Bureau of Public Roads and Forest officers Kneipp, Long, Martin and Norcross discussed these topics.

The conference was considered very successful and some of the reviewi committees were kept busy through the 16th, and 17th, to complete their reports.

District 3 - Southwestern District

Versatility of forest officers is indicated by the wide variety of business enterprises taken up by men on leaving the Forest Service. The Forest ranger has often been spoken of as Uncle Sam's Handy Man, and some data gathered by District Forester Pooler seems to substantiate this claim. Recently 275 former employees of the district were written to and to date replies have been received from 115 men. Of this number there are 35 farmers and stock growers, one feed and fuel dealer, two life and fire insurance agents, one contractor, three merchants, two brokers, one salesman, one real estate dealer, one restaurant keeper, two automobile dealers, two mining engineers, one ship builder, one draftsman, one engine equipper, two civil engineers, one oil well driller, and one coal miner. There are also eight forest school professors, one alumni secretary, one artist, one curator of a museum, two lawyers, one manager of a telephone company, one secretary of a big cattle growers' association, and two assistant State foresters. One is a wood manufacturer, three are in the lumber business, and three are deputy sheriffs. In addition there was a scattering of about half a dozen other occupations.

In commenting on these figures, District Forester Pooler said,

"Young men of education and ability are coming more and more to recognize work in the Forest Service as an invaluable training. This is because work in the mountains brings out the qualities of self reliance and initiative to a degree that few or no other professions do. All sorts of business enterprises are constantly drawing on the Forest Service for men of broad administrative training, and the versatility of Forest Service work certainly gives this training. Only recently the government of Liberia came all the way to Albuquerque to find a man qualified to protect its interests in the proposed boundary survey between Liberia and the French African possessions, and they picked Lee C. Daves of this office at a salary and perquisites three times as great as the United States government was willing to pay him. Likewise the government of Porto Rico has selected Fred H. Miller, of the staff of the Manzano National Forest with headquarters at Albuquerque, for the position of Assistant Forester in Porto Rico.

"Naturally the Forest Service is not keen to lose its good men, but we are not averse to securing the services of bright young fellows for several years, even if we run the risk of having them picked off later by private companies that offer high salaries for well-trained men."

Chances for a fire law in New Mexico as a part of the forestry program seem very good in view of the provision of the State Constitution, which is to this effect:

"The police power of the State shall extend to such control of private forest land as shall be necessary for the prevention and suppression of forest fires."

In trying to cross Lynch Creek at Lockman's Ford west of Prescott, Arizona, in a machine, National Forest Examiner L. R. Lessel and Forest Ranger Charles N. Lockman found the creek running high and failed to cross. The machine capsized, the occupants had to scramble for their lives, and lost some of their belongings. The accident to Messrs. Lessel and Lockman, although disagreeable to themselves, was helpful to others because it deterred the auto mail carrier, with a full load of passengers, to attempt the crossing.

N. F. Newman, of the office of Engineering, has resigned from the Forest Service and becomes Road Engineer of Gila County, New Mexico. Mr. Newman has been engaged on entry survey work in the district.

The appreciation of the National Forests as a recreational and summer home region is spreading far. The Apache reports an application from a resident of New York City for a term permit near Greer. Plans also were submitted for a summer home of nine rooms and bath, construction of which is to begin as soon as weather permits.

The cooperative agreement between Greenlee County and the Secretary of Agriculture provides that; unless prevented by strikes, unusual weather conditions, the Act of God, the public enemy or other unforseen causes, Greenlee County shall complete its portion of the Clifton-Springerville Road by December 31, 1921. It is now ten months since actual construction work began and less than six miles of road have been completed. Therefore if Greenlee County reaches her goal, at the end of approximately thirty-three miles, by the set date, she will have to speed up. However, better time may be expected on the remainder of the road since the first four miles consisted largely of rock work which will be less in evidence on the balance of the project.

The Salt River Valley Water Users' Association, through project manager W. R. Elliott, examined a large portion of the Tonto Forest last November with Supervisor Goddard to see what was being accomplished in watershed protection. In a recent letter to Mr. Goddard, Mr. Elliott says:

"In behalf of the Salt River Valley Water Users' Association, I will say that the result you obtained on the Tonto watershed is worth hundreds of thousands of dollars to the ranchers on this project and if the same results could be accomplished on the Verde River watershed it would be worth a like amount. At a recent meeting of the Board of Directors of the Water Users' Association I reviewed the situation as it now exists on the two watersheds from which we obtain our irrigation water for some 250,000 acres and the Directors wished that I convey to you their appreciation of the service rendered.

The native elk, which was once so abundant in the Southwest, was exterminated about 1890. So swift and complete was the extermination that scientific institutions have not even any specimens by which to determine whether this elk was a distinct species from the northern elk.

E. A. Goldman, Chief of Biological Investigations in the Biological Survey, is very anxious to secure either as a gift or a loan, for study and inclusion in the Smithsonian Institution collections, specimens of the horns of this elk. Old horns are fairly common at ranch houses in various parts of this District, and field officers have been called to assist in getting horns, if possible, either as a gift or a loan to the Government. Any horns secured should be accompanied by whatever evidence is available as to the time and place they were originally found.

Guy B. Rencher, formerly ranger on the Apache and who saw active service with the A. E. F. in France, has been reinstated and assigned to the Tonto Forest.

A nine-foot jaguar, or "Mexican tiger," was recently shot in a cave in the Rincon Mountains on the Coronado. This is the largest and fiercest of the American cats; and its occurrence, though chiefly confined to Mexico and Central America, is by no means rare in Southern Arizona and New Mexico.

District 4 - Intermountain District

Another speedy settlement of a trespass case in the district was made on the Idaho Forest by Supervisor Mann. In September about 4,800 head of sheep trespassed on the Idaho Forest while being trailed out from the Thunder Mountain Division along the wagon road from the Dustin ranch. The ranger's report was submitted in January. On February 2 a letter was written to the owner of the sheep, on February 6 acknowledgment of the trespass was made and a remittance of $72.00 enclosed. The payment was at the rate of three-fourths cent per head for two days for 4,800 sheep.

The expeditious closing of the case by Supervisor Mann was possible in accordance with the new regulation authorizing forest supervisors to settle innocent trespasses not exceeding $100 in damages.

The Lowder Brothers of Parowan, Utah, employed as trappers and hunters by the Biological Survey, succeeded in killing a large male lion in the hills five miles east of Parowan on January 12. The lion had just killed a buck deer and was feeding on the carcass when located. With the aid of their dog they soon had the lion in a tree and one of the hunters shot him. He weighed 150 pounds and measured nine feet from the tip of his nose to the tip of his tail. Clair and Lee Rowley of Parowan trapped a female lion near the Little Creek Peak within the Forest on January 30. Two dead deer were found within a short distance from where the lion was caught. She weighed 100 pounds and measured six feet four inches long from tip to tip. Lions in this locality seem to be killing a good many deer.

That there's more than one way to kill a cat was demonstrated a few days ago by Forest Ranger Harry Kersey, of the Minidoka Forest, Idaho, who was riding up Kelsaw Canyon, accompanied by his dog. The dog located a bunch of wildcats and with Kersey's assistance treed six of them. Ranger Kersey did not have a gun with him. He accordingly tied his coat around one tree, his vest to another, his "chaps" to another, etc., and tied the dog to a tree near the center of the group. He then "hit a high lope" back to his station, secured a gun and got back in time to get all six cats. There were several more cats in the family but there were not dogs and clothing enough to hold more of them up in the trees.

District 5 - California District

"Fighting the Forest Fire" by District Forester Paul G. Redington, was the topic of the evening at the regular bi-monthly meeting at San Francisco of the local Association of the American Society of Civil Engineers.

The Calaveras Live Stock Association, at its last annual meeting, passed the resolutions given below. The special rules contained in the last paragraph have been approved by the District Forester, and Supervisor Wulff has arranged for their enforcement on the area covered by the Association:-

WHEREAS, The Calaveras Live Stock Association, at the annual meeting held at San Andreas, California, on November 18, 1919, was addressed by the Forest Supervisor of the Stanislaus National Forest;

AND WHEREAS, it was agreed by the members of this association to cooperate fully with the Forest Service in conforming to special rules and regulations governing better range management;

AND WHEREAS, a full and frank discussion was held on these rules and regulations which concerned the salting of stock, the visiting of ranges more frequently, the placing of good grade or thoroughbred sires on the ranges, the building of drift and other fences;

NOW, THEREFORE, BE IT RESOLVED, that none but good grade or thoroughbred sires of any recognized good beef breed shall be allowed in the Stanislaus National Forest after the grazing season of 1920, the proportion to be at the rate of [illegible] sires to 100 cows; that members of this association grazing on the Stanislaus National Forest place on their respective ranges not less than 8 lbs. of salt per animal per season; and that every stockman visit his range at least once a month during the grazing season, and know his range thoroughly.

Law Enforcement and Investigation of Crimes

Under this heading the November, 1919, edition of "The Policeman's News" carries three full pages of material quoted from District Five's "Arson" Manual. "Special stress," says the editor in commenting on the "Manual," is laid upon preventive measures of all kinds and the general instructions and requirements for this work are as applicable to the city officer, as to one whose work is confined to the forest and plains. Because of the special merit contained within its pages, we are reprinting a chapter herewith."

California's Timber Outlook for 1920

California pine lumber is in very great demand just at the present time. Stocks at the mills are very low, the market is an active one, (that is to say, the operators are securing as high prices as the buyers are willing to pay and will not enter into any selling contracts for the future) and the margin between operating costs and selling prices is the largest ever known in this locality. This lively demand for lumber has reflected itself in a greatly increased demand for stumpage and in higher stumpage rates. Scores of prospective buyers are visiting the District office and the various Forests, inquiring for available tracts of stumpage. Our problem is no longer to find buyers, but rather, to find areas available for sale under our present policy. Definite plans are now being matured by stumpage owners to install at least five very large new pine lumber operations within the next three or four years, and it is predicted that the cut of California pine will at least double within the next five-year period.

California's Timber Outlook for 1920

The demand for stumpage on the Plumas Forest along the Western Pacific Railroad is very lively. The three following areas have recently been appraised for sale: Penman Peak Logging Unit, involving 10,000,000 feet of yellow pine, sugar pine, Douglas fir, white fir and incense cedar, the average stumpage rate for all species is $3.52 per M; the Red Hill Logging Unit, involving 10,000,000 feet of mixed species, at an average stumpage rate of about $3.75 per M; the Thompson Creek Logging Unit, involving 96,000,000 feet of mixed species at an average recommended rate of $4.00 per M. On the Shasta Forest an application has been received for about 100,000,000 feet of yellow pine in the lava bed country in the eastern part of the Forest. This area will be cruised and appraised in the near future. On the Stanislaus Forest one of the operators has recently applied for a tract of about 75,000,000 feet. This application has been rejected for the reason that the tract is a portion of a much larger unit which we feel should be withheld from sale until a management plan has been prepared. It is rumored that an operator on the Sierra Forest has recently acquired a very large tract of private stumpage and will install a large operation. This new development will undoubtedly lead to an application for National Forest stumpage surrounding the private area.

District 6 - North Pacific District

More than six thousand people registered at the Denny Creek Campgrounds on the Snoqualmie Forest last summer. August was the banner month with 2,422 registrations.

Forest Ranger J. W. Lundin estimates that only about one-fifth of the visitors register and on this basis fully 20,000 people probably visited the campgrounds. Mr. Lundin reports that the shortness of the season makes it difficult to construct the improvements except when the camp is being used by visitors. In spite of this difficulty, the road from the Sunset Highway to the campgrounds was widened. The present equipment of tables, fireplaces, parking spaces, etc., are insufficient to handle the crowds.

The campgrounds are used practically altogether by parties staying but a few hours. Only three parties stayed longer than a month.

Dead cedar on the shores of Quinault Lake on the Olympic Forest has come to life -- not botanically, but commercially. This is all due to the high price of shingles. This region is fifty miles north of Gray's Harbor and thirty-five miles from the railroad. Auto trucking seems the probable solution. Several of the applicants for the cedar want to use the lake waters for towing and booming, for which authority must be obtained from the Indian Service. Although the lake is surrounded by National Forest land except at one end, it touches enough of the Quinault Indian Reservation to cause more or less complication in the recreation development of the Forest shoreland through the existing Indian boating monopoly.

The presence of many horses on Forest ranges has been a source of complaint from the permittees using these ranges. A great many of the horses are valueless; many are unbranded - although a majority carry various brands, some of which are unknown and unrecorded. The attempt to remove these horses from the various ranges has been more or less difficult on account of estray laws which have not seemed quite to cover all of the complications arising in connection with their removal and disposal.

The greatest success in securing the removal of this class of stock from the range has been had on the Colville and Okanogan Forests. E. W. Wheeler, of the Colville, who handled the matter for that Forest in cooperation with the county auditor, writes interestingly of it to the District Office. He states that much has been accomplished toward securing better grazing administration and that results are greater than could have been achieved in any other way in the same time. The horses were rounded up by the cattlemen, placed in pastures, the list of horses filed with the county auditor, and proper advertisement of them made. A good many were claimed by the owners, while others were sold at the auctions. The stockmen generally worked enthusiastically with the Service in this work. A few, however, bitterly opposed the action taken and endeavored to interfere in every way possible. They were up against both the State and Federal law, however, Trespass cases were made against owners and receipts from trespass amounted to about $851.

Norman F. Coleman, who succeeds Brice P. Disque as executive head of the Loyal Legion of Loggers and Lumbermen, called at the District Forester's Office recently to inquire concerning opportunities of cooperation between the Forest Service and the Legion. It is expected that the Legion will avail itself of Forest Service reels, lantern slides, lecturers, and reading matter during its new era of peace-time instead of war-time activities. "The 'Four L' organization seeks to unite lumber operators and laborers under one program. It includes increased production, sanitation, and good wages, for men who work in the woods and the mills. As it succeeds in enabling workers and managers to pull together the Loyal Legion is tugging at the country's gravest problems." The Legion covers Oregon, Washington, and Idaho, being an alliance of bosses and laborers.

Ranger meetings are being held throughout the District, as a means of getting in readiness for the 1920 fire campaign and other activities. These conferences are attended by the Supervisors and by headquarters men directly interested in protection, trail development, law enforcement on the Forests, timber sales, home sites, camp grounds, grazing, etc. The meeting of the Snoqualmie rangers, at Seattle, was addressed by Colonel Howard Hanson, of the prosecuting attorney's office, who brought out the great value of the National Forest resources and assured Forest officers of the fullest cooperation by county officials in enforcing laws to protect the Forests.

Each forest-patrol sub-station of the Northwestern district (at Eugene, Medford, La Grande, and Spokane) has chosen its practical forester to attend the school for aviators and forest-protection representatives at March Field, Southern California. The school started February 20. It will increase the efficiency of airplane patrol work by preparing practical forest men, who know the territory to be covered and hence can easily recognize landmarks, to act as observers. This conference of foresters and aviation officers, or "school," in addition to teaching observing methods will instruct those who handle the forestry planes as to the means of communication between the machines and the ground. The Forest Service men chosen are Charles W. Boyce, of the Columbia; William E. Naylor, of the Cascade; Fred M. Gruver, of the Siskiyou; and Lee F. Chartrand, of the Wenatchee.

A student of wild life in Oregon suggests to the legislative committee working on revision of the fish and game laws that they consider cougars and wildcats, rather than greedy hunters, as the worst menace to deer. He explains that predatory animals eat only a small part of each deer that they kill, and that if it were not for cougars venison would be generally available in the markets and on the tables of the Northwest. "A deer is killed unlawfully and the hunter is fined from $50 to $150. Added to this is that part of the expense necessary to maintain the salaries of game wardens. A cougar kills 52 deer a year at the lowest average, and at $50 apiece his scalp should be worth $2,600," reasons this advocate of a larger bounty for predatory animals.

Boy Scouts of Portland and their friends have been informed of their responsibility in fire prevention and at the same time entertained through a series of illustrated talks given through January, and still in progress, at schools, churches, halls, libraries, and other gathering places, by Ranger Albert Wiesendanger, who has been on detail in Portland. It is estimated that over 5,000 boys will profit by this series. In addition to his talk on how Boy Scouts can aid in preventing forest fires, Mr. Wiesendanger shows and explains the Osborne fire finder, Adams portable telephone, and camp equipment. The boys seem keenly interested.

District 6 - North Pacific District (Continued)

The discussions and reports at a recent meeting of the research men of this District brought out that a large part of the District investigative work for 1919 has been along lines leading to direct benefit for timber owners, lumbermen, sheep and cattle men, and the public generally; though studies of particular interest to the technical forester have been made. Among the subjects proposed for investigation during 1920 are a study of the logged-off land situation in Oregon and Washington, with a view to determining the amount of such lands, their value either for agriculture or for growing timber, and how best a second crop of timber may be procured; a study of the turpentine possibilities of the native pine; and a study of improved methods of handling sheep and cattle grazed within the National Forests to prevent injury to the range and forest and improve the quality of the stock. As a step toward successful reforestation, it is proposed to continue on a larger scale the studies of reproduction and growth already under way.

District 7

When it comes to timber sale statistics District 7 prefers to rank the districts according to receipts per acre. The following table indicates the reason for this preference:

	Net acreage	Receipts from timber to January 31, 1920	Receipts per acre
District 7	2,619,235	$109,856.07	.04
District 5	18,958,004	228,627.81	.012
District 1	22,480,180	198,773.12	.009
District 2	20,112,182	181,586.72	.009
District 3	18,679,126	112,242.75	.006
District 6	43,767,607	246,608.85	.005
District 4	27,952,857	47,498.11	.002

Although the eastern district is decidedly at the tail end of the league in net acreage, it no longer occupies the cellar position in total receipts from the sale of timber and timber products. The rapid increase in the receipts is due almost entirely to the keen demand for stumpage in the East, with the resulting high stumpage values. Sales of hardwoods show stumpage prices ranging from $8 to $11 per M for yellow poplar; white oak $8 to $10.50 per M; red oak $7 to $9 per M; chestnut $7.50 per M; chestnut oak $7.25 per M. Among the softwoods: yellow pine $7.55; white pine $10.25; spruce and fir $6; hemlock $6.25; pitch pine $6.25.

With such prices as these it is not necessary to sell the huge amount of timber that the western districts must dispose of to make any kind of a creditable showing.

Even though a very considerable portion of District 7 is classified as cut-over lands the amount of timber being sold now is still considerably under the maximum possible on a sustained yield basis. The district is now taking stock and as soon as the supervisors have completed the preparation of their timber sale policies and management plans it expects to enter the timber sale business in earnest. There is every indication that the market can consume without dulling its appetite in the slightest every bit of timber the Government can market in the East.

In an interview with the Bulletin's reporter District Forester Reed made the following statement: "Why, we haven't really started to sell timber yet - we are just cleaning up some of our salvage material now and are going cautiously at that - just wait until we get our campaign mapped out and we will give the 'western dudes without eastern experience' a new mark to shoot at."

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

March 1, 1920.

"Showing" The Sheepmen

During my recent trip to the various western livestock meetings the statement was made at all of the sheep association meetings that the Forest Service was increasing the number of cattle on many of the Forests and securing the range for this purpose by making reductions upon the number of permitted sheep. This was, of course, denied by me but I found there was a very deep-seated idea with most of the sheepmen that this was absolutely the case.

The Wyoming Wool Growers' Association at Cheyenne passed a resolution to the effect that "there was a tendency on the part of the Forest Service to reduce the number of sheep" and opposing any further reductions along this line. On my return to Washington I looked up the question as it related to the National Forests in the State of Wyoming, to which the Wyoming resolution referred. It was rather interesting to find from the figures secured that the Wyoming sheep growers have little or nothing to complain of on this score. During the grazing season of 1920 we issued a total of 1,181 permits covering the grazing of 143,204 head of cattle, while during the same period we issued permits to 329 owners of sheep for the grazing of 680,670 head of sheep. Taking the 143,000 head of cattle and multiplying it by 5, which is the accepted ratio on the range as between the two classes of stock, the result shows that, reduced to sheep units, the cattlemen grazed 706,000 head of sheep while the sheepmen grazed 680,000 -- a difference so comparatively small as not to indicate any hostile action by the Forest Service toward the sheep industry in the State of Wyoming. In other words, the National Forests in the State of Wyoming are at the present time divided as fairly between the two interests as it is possible to do.

If there has been a greater increase in the number of cattle grazed on the National Forests in that State than there has been in the number of sheep, it is due wholly to the fact that the sheepmen were more generally inclined to avail themselves of the grazing privileges of the National Forests at the time they were established than were the cattlemen. Many of the Wyoming cattlemen were surrounded by so much public domain that they saw no need of securing permits and paying grazing fees when they could get practically the same feed on the public domain adjacent to their ranches without cost. The sheepmen, however, realizing the need of the high mountain ranges for the production of lambs, lost no time in securing permits and establishing permanent preferences.

Later on when the cattlemen saw the public domain about them passing into the hands of new settlers they became more interested in securing permits, and thus the number of cattle grazed was increased year after year, whereas the number of sheep has been fairly permanent from the very first. The increase in cattle, however, was secured almost entirely through a closer utilization of the cattle ranges, better management of them as well as the opening up for cattle of ranges not previously considered available for this class of stock.

The showing on the Wyoming Forests may be duplicated in many other Forests and whenever this charge is made we can probably meet it and prove ourselves right by comparison of the actual number of stock in each class now being grazed on the Forests reduced to a common unit.

W.C.BARNES.

"Ah fine business"

The following is quoted from a letter received by Supervisor Chas. A. Beam of the Wyoming Forest from one of his grazing permittees:

> "I once Heard ah Neighbor of mines say it was ah fine business the sheep business for He got His wool money in the spring, & He got His Mutton Money in the fall, & Now he sead i am getting My pelt Money in the winter, & plenty of then Not him alone but all of us."

Supervisor Beam regretfully comments that the foregoing is very largely true, since from the best information available to his office the sheepmen of southwestern Wyoming who are attempting to winter their stock on the deserts on the range this year are sustaining some rather heavy losses.

No Pay - No Permit!

Adjacent to many of the National Forests in Utah are large areas of the public domain used extensively for grazing. Such range, lying as it does at low elevation, usually dries up and is eaten out very early in the season, with the result, that stock feeding on these areas naturally drift onto the nearby better Forest ranges. This has resulted in many owners having more cattle on the National Forests than is covered by their permits; and because of the rough bushy character of this country it has been very difficult to round up stock and make check counts.

Various systems have been adopted to get a line on permitted and unpermitted stock, such as by brushing the tails, painting, and by ear-tagging cattle under permit. The last system is the one that has proven most effective and which has been adopted on a number of the Forests of District 4.

In connection with this tag system of marking cattle, a special rule was recently approved by the District Forester on application of the Advisory Board of the Wales Cattlemen's Association of Utah, providing that permits for the 1920 grazing season on the Uinta National Forest shall not be issued to members of the Association until the regularly authorized prorata assessment for the purpose of meeting expenditures incident to the purchase of tags, has been paid. This new ruling will be of interest to all Forest officers, in that the Service is here taking a stand that livestock owners shall meet their association obligations before they are eligible for grazing permits on the National Forests.

Man-Caused Fires

For all practical purposes fires can be divided into those caused by lightning and those caused by man. Man-caused fires, generally speaking, can be prevented; and in a sense, the number of fires of this sort indicates the effectiveness of our educational efforts. The two charts reproduced below show the percentage and number of man-caused fires in Districts 1, 5, and 6 for the past five years.

The percentage chart shows that all Districts dropped sharply in 1918 and all rose in 1919. In both of the man-caused fire charts all fires are classified as man-caused except those designated as lightning fires.

Salient points brought out by a study of the percentage chart are as follows:

All Districts dropped sharply in 1918 and all rose together in 1919.

District 1 has the distinction of starting with the lowest percentage of man-caused fires and rising in 1917 to the highest percentage of any District during the five-year period. By reference to the following chart it will be noted that the high percentage in 1917 was due not to a small number of lightning fires but to a large increase in the actual number of fires due to human agency.

District 5 held the lowest position in 1917-1918 but went to the top in 1919. District 5's percentage was higher than in any preceding year of the period.

In general the percentage of man-caused fires is astonishingly high. These percentages are a challenge to the efficiency of the Forest Service and to the individuals carrying any degree of responsibility for fire protection.

Notable points brought out by the charts showing comparative number of man-caused fires are as follows:

All District lines move in the same direction each year. Aside from the fluctuations in District 1 during the first three years, the upward or downward angles of all Districts are surprisingly uniform.

The general tendency of the lines for Districts 5 and 6 are downward but the general tendency for the District 1 line is upward.

District 1 begins much below the other two Districts but finishes with a number of man-caused fires some 350 above the next highest District.

District 5 starts with the highest number of man-caused fires but ends with the lowest number. It would be interesting to know to what extent the comparatively favorable direction of the lines for Districts 5 and 6 for 1918 and 1919 are due to the anti-fire propaganda carried on in those two Districts.

All Districts showed an upward tendency in 1919. The upward showing of the District 1 line can be readily accounted for by the unprecedented climatic condition* with a lack of care with fire on the part of settlers, campers, etc. Whether seasonal variations can be held responsible for the upward tendency in the other two Districts is not so clear.

Both of the above charts suggest that the opportunities for literal fire prevention have not been exhausted. They give some ground for the hope that intensive cultivation of the opportunities in this direction may lead within a few years to a wholly different sort of a record.

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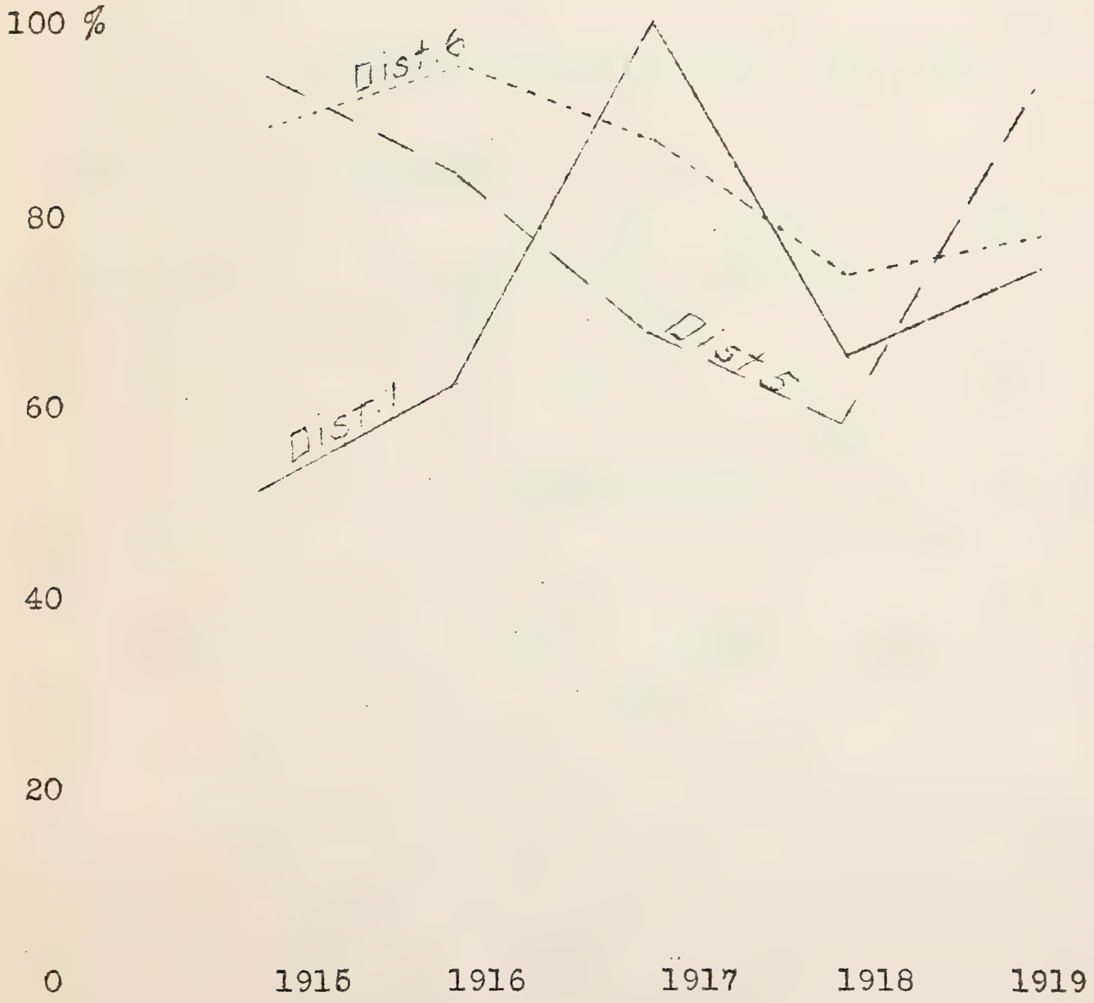
*combined

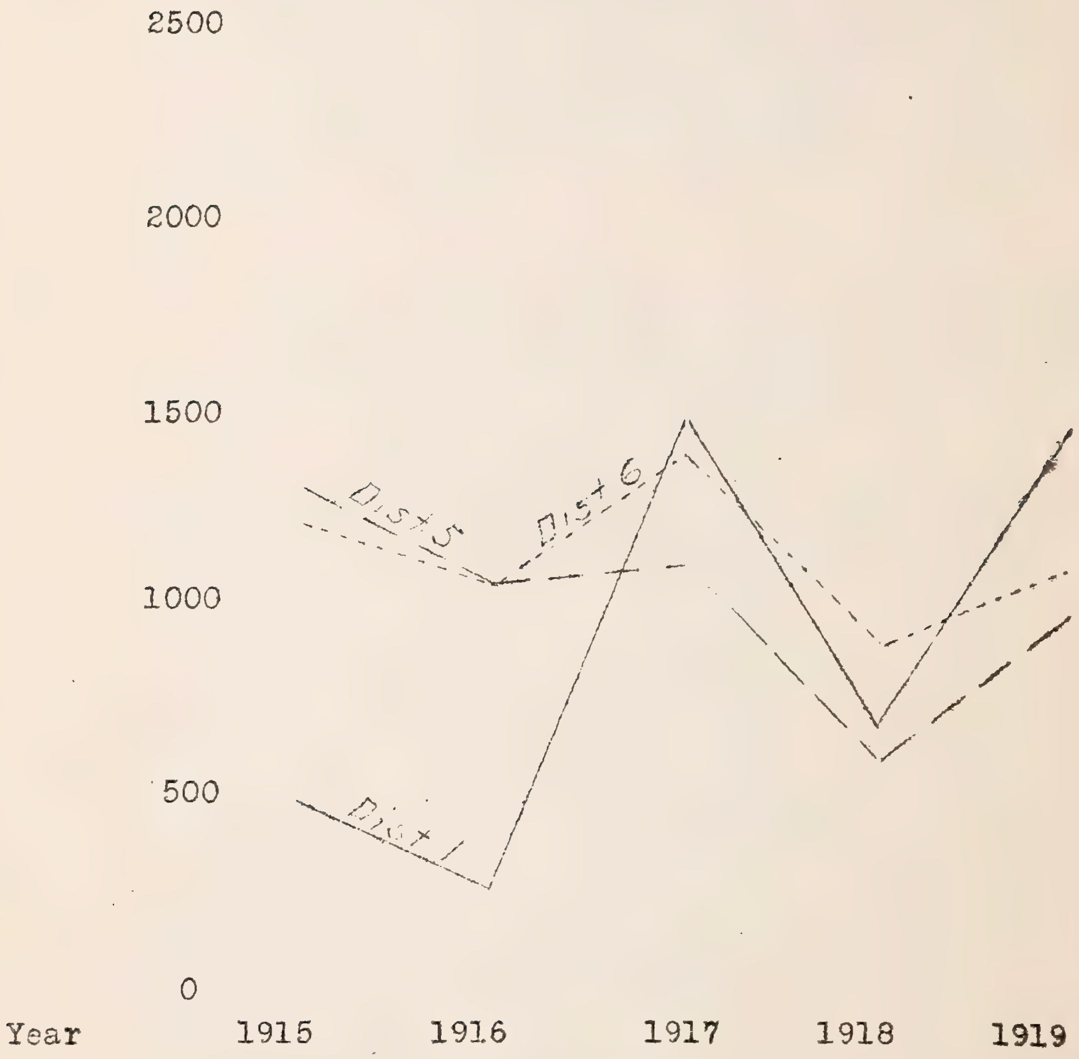
Per Cent of Man-caused Fires

Districts 1, 5 and 6



Number of Man-caused Fires

Districts 1, 5 and 6



Man-Caused Fires (Continued)

During the period covered by these charts all Districts have had to contend with rapidly increasing use of the woods and an increasing seasonal danger, but on the other hand all Districts have had the advantage of increasing skill in fire protection, improvements, equipment, greater experience, and development of cooperation.

The work done by Districts 5 and 6 in securing convictions during the past year is particularly noteworthy. The following tabulations show the result of the campaign in District 6.

Leaving campfire unextinguished	83
Incendiaries	7
Burning slash without permit	17
Allowing fire to escape	7
Inadequate spark arrester fires	7
Strike in fire line	1
Refusing to fight fire	1
Cigarette fires	2
	125

Resulting in:

Convicted	91
Held for grand jury (incendiary)	3
Not guilty	3
Under investigation	9
Awaiting trial	12
Settled by payment of cost and damage	7
	125

District 5 also had excellent success and shows a total of 250 convictions. Would "arson squads" in the other Districts result in lowering the number of man-caused fires?

Another Change in Nomenclature

To the list of changes in Tree Names given in the Bulletin of February 9, 1920, should be added Abies amabilis, formerly known as Amabilis fir, for which the name of Silver fir has been approved. This change was made some months ago but has never been formally announced.

"Reading Material" for Forest Officers

The President of the American Library Association has recently expressed the willingness of the Association to furnish books to Forest officers, especially Forest rangers. The plan is to have a sort of circulating library from which books could be drawn. As soon as details of the idea are worked out they will be announced in the Bulletin.

The following extract from the "Indian Forester" of January, 1920, is of interest as indicating the cause of the probable uses to which the airplane will be put in forest work. Of particular interest is the statement regarding the feasibility of marking landings in the mountains.

"It will probably be found that by means of air patrols such places as the Sundarbans and the Bramaputra can be very effectually watched from the air and attempts at illicit extraction of timber by smuggling down the rivers frustrated. Seaplanes could go alongside any rafts seen and investigate them. It would become almost impossible for the wily timber thief to send off warning to his accomplices that the D. F. O. had set out to patrol, as, if a machine left, he would never know its destination. It would also be possible to carry out the most sudden and unexpected inspections.

As regards utilization, aerial transport may be of great value. There are certain commodities such as eggs, fish, fruit, seeds, etc., which have to be carried quickly and kept cool lest they decay. It would be possible to transport young seedlings and seeds very quickly from place to place with the least amount of damage and loss. For instance seeds, transplants, cuttings, seedlings, etc., could be easily brought from Africa for trial in India at experimental stations.

Taken from The Indian Forester, January, 1920. (Continued)

Valuable commodities such as rosin and lac which are not very bulky could easily be extracted from the inner recesses of mountains such as the Himalaya. A great saving would be effected as no roads would be required.

Within a few years India will probably be covered with a network of aerial routes. These will begin by being frontier patrols, postal routes and surveys for pilotage purposes on the great rivers. Whether passengers will ever travel largely is a very debatable point. From the forest point of view it will be possible to run the survey in conjunction with each of the above and the patrols will work in with the other two items. In addition to all this it should be remembered that there will be great use made of the air for the purpose of the ordinary survey. There will eventually be landing grounds and aerodromes regularly placed all over the country and these will be the foci for all flying operations in their neighbourhood. It will perhaps be objected that it will be impossible to survey and extract from such places as Bhutan because they are too hilly to afford landing grounds. This is hardly likely to be the case, though it was put forward at a meeting of the Royal Geographical Society in London recently. In Macedonia and other parts of the front the conditions could hardly have been worse for landing purposes on account of the hills. There were tracts of country 30 miles in length where no convenient permanent landing ground could be found. Bombs were regularly taken over hills of 8,000 ft. to their targets. In one year the squadron lost only one machine through its being impossible to make a successful forced landing in the hills and the pilot was unhurt, though the machine was smashed. Again on several occasions spies were landed by day and night among the mountains and on the most inhospitable and inaccessible spurs. Night reconnaissances and bombing raids were continually carried out in which the machines had to rise over hills and descend into valleys. There can be no doubt that work will be found possible in the same way in the Himalaya foothills and to heights and places of use to us."

Legislation

The following resolution, introduced by Senator Capper, was passed by the Senate on February 21.

"Whereas it has been reported that the forest resources of the United States are being rapidly depleted, and that the situation is already serious and will soon become critical; and

Whereas these alleged facts are either largely unknown to the public or are in dispute: Therefore be it

Resolved, That the Secretary of Agriculture be, and he is hereby, directed to report to the Senate on or before June 1, 1920, on the following matters, using what information the Forest Service now has available, or what may be obtained readily with its existing organization:

1. The facts as to the depletion of timber, pulpwood, and other forest resources in the United States.

2. Whether, and to what extent, this affects the present high cost of materials.

3. Whether the export of lumber, especially of hardwoods, jeopardizes our domestic industries.

4. Whether this reported depletion tends to increase the concentration of ownership in timberlands and the manufacture of lumber, and to what extent; and if such concentration exists, how it affects or may affect the public welfare."

Coming at the present time this is one of the most important things the Forest Service has ever been called upon to do, and offers an exceptional opportunity for us to place the facts regarding the timber situation before Congress. The resolution carries no appropriation and it will not be possible to make the detailed investigation which would be desirable. It will be necessary to present to Congress the data already collected with such additional information as can be secured by the regular force.

Legislation (Continued)

Col. Graves and Mr. Sherman appeared before the Public Lands Committee of the House during the past week in regard to the proposed Roosevelt National Park, which will include a considerable amount of the Sequoia National Forest. The committee favors the creation of the park and the main question to be decided is that of the proper boundaries. The Secretary of Agriculture has submitted a report showing the area which, in his opinion, could properly be set aside as a national park. This includes Mt. Whitney and the King's River Canyon, and comprises about 400,000 acres, on which there is approximately one billion feet of merchantable timber. The greater part of this is at the present time inaccessible, but will eventually be needed for lumber. A large area of valuable grazing land is also included. The boundaries proposed by the Park Service include about 850,000 acres. It is probable that the Committee will compromise between the two proposals.

Washington Notes

Invitations have been received to the wedding of Miss Winifred Skinner to Mr. Daniel Dorrance Bronson. The ceremony will take place at Dumbarton Club, Georgetown, D. C., on March 9.

Coincident with the news of Mr. Bronson's forthcoming marriage is the announcement that he has submitted his resignation from the Forest Service effective March 1. With the exception of about three months during the war when he was in the Naval Aviation Service, Mr. Bronson has been in the Forest Service since February, 1905, and for thirteen years has been connected with the Branch of Operation of the Washington office. He is a graduate of the Biltmore Forest School and is widely known in the Service. He has the hearty good wishe of the entire organization for his future success.

Paul D. Kelleter, in charge of the Office of Information and Editor of the Weekly Bulletin for the past two years, has been transferred to Operatio to fill the vacancy caused by Mr. Bronson's resignation. Mr. Kelleter is succeeded in Information by Jno. L. Cobbs, Jr.

R. R. Randell of Engineering has returned to Washington after a protracted trip to the western districts.

Col. Graves attended a meeting of the Tennessee State Forestry Association at Nashville about the middle of the month. He found that there is considerable need in Tennessee, as in other southern States, for the help and stimulus of the Federal Government in improving forest conditions, and hopes to find some way to extend this aid.

J. G. Peters attended a meeting of all forest officers of New York and the New England State Foresters in Albany, N. Y., last week. The meeting was for the purpose of discussing forest fires, and was a decided success.

An examination by C. R. Tillotson of the maritime pine plantations on the Florida Forest shows that in spite of earlier favorable growth this species has not been able to maintain itself against the native species and is gradually disappearing.

District 1 - Northern District

The Nezperce has submitted some interesting figures on rates of pay for fire fighters last summer. Their figures show that the average fire fighte on the Forest worked 12.7 hours a day and received a daily wage of $4.52; foremen 12.8 hours, daily wage $6.29; strawbosses 12.9 hours, daily wage $5.25; cooks average $5.05; flunkies $3.74; packers $3.87; time keepers $3.44; emerger smoke chaser $2.45.

The average wage for all effective fire fighters, foremen and strawbosses was $4.70, while provisions, equipment, etc., total $4.60, making the cost of maintaining fire fighters in the field $9.30 per man per day.

District 1 - Northern District (Continued)

The Kootenai and Deerlodge Take Pennants

An official "score," based on the efficiency displayed in handling the fire situation and the results secured during the 1919 season, shows that the Kootenai stands at the head of the list of Forests for western Montana and Idaho, while the Deerlodge leads in eastern Montana. Figuring the score in the fire game is somewhat more complicated than in baseball. An effort has been made to work along the same general principles, however, and while "hits, runs, and errors" do not appear under those particular headings, they show up in the final score.

The element of chance and luck is present in the fire game as in all others. Those Forests with low scores may have been handicapped by "jinxes" and may think that those which were more fortunate each carried a rabbit's foot. But no one can get all of the "breaks" and even the hardest hitting teams have "slumps." Of course the scorer is bound to be criticized and it may be that after more experience a better system can be worked out. One thing worth noting is that a poor showing under any rating lowers the score perceptibly. The Kaniksu, for example, had an excellent record but was pulled down badly by a low rating in "elapsed time -- report to start." Another point brought out was that the relation between the "total elapsed time from discovery to start" and the final rating of the Forest is most important and indicates the value of quick action.

The final score follows:

Summary of ratings.

Forest	Av. area per fire	Cost Per fire	% N.F. area burned	% class C fires	% class C^3 fires	Av. area when discovered	Av. area when reached	Av. Elapsed time		Av. rating
								Disc. to report	report to start	
					Western Montana and Idaho.					
Koot.	97.2	84.4	93.3	49.8	92.0	96.5	79.6	97.4	86.7	86.30
Lolo	97.0	65.2	80.7	57.4	74.8	96.3	87.3	92.4	91.8	82.54
Cab.	97.8	87.8	94.3	65.2	86.8	67.7	59.9	93.0	88.2	82.30
Pend O	98.1	77.1	96.3	45.7	65.6	96.8	90.5	80.0	82.9	81.44
Kan.	99.4	89.2	98.7	59.4	77.6	99.5	98.8	92.5	16.0	81.23
Coeur d	91.9	29.2	76.7	45.2	75.2	97.2	92.2	96.9	93.9	77.60
Blkft.	90.6	75.4	79.0	50.4	59.2	92.5	74.6	96.1	79.5	77.47
Btrroot	96.0	75.8	94.0	44.0	75.2	85.8	64.5	84.2	57.7	75.34
St.Joe	94.4	65.4	91.0	56.6	64.0	98.1	57.7	73.6	76.4	75.24
Flathd.	86.8	31.9	82.4	49.8	56.8	86.1	40.3	65.3	93.9	65.92
Msla.	90.0	49.5	79.7	31.8	46.6	90.1	33.3	68.3	38.6	58.65
Nez.	51.6	26.7	44.7	8.2	10.4	85.0	32.4	92.0	78.4	48.37
Selway	9.9	12.6	15.8	1.8	5.2	13.2	18.0	85.4	63.8	25.10
Clrwtr.	66.9	12.3	29.9	49.4	56.4	data not available.				
					Eastern Montana.					
Deerlg.	99.2	94.9	97.7	64.0	66.8	96.4	89.5	98.1	97.2	91.53
Custer	99.0	28.1	99.3	25.0	100.0	99.8	97.6	95.0	97.6	90.15
Bvrhd.	97.4	78.9	99.0	56.0	86.8	93.2	91.1	92.0	85.9	87.91
Gallatn	98.9	90.5	99.2	42.4	71.6	99.2	96.7	96.2	90.4	87.23
Absaroka	97.5	77.7	99.2	76.6	53.2	99.4	99.5	72.9	90.2	85.13
Bearth.	99.2	96.1	99.7	55.6	100.0	98.0	89.8	22.7	92.6	83.74
Jeffersn	94.2	82.5	96.7	48.8	88.0	92.7	20.1	32.4	93.2	72.06
Helena	96.4	84.8	94.0	29.6	48.8	93.4	77.7	14.4	79.3	68.71
Madison	91.6	57.7	97.8	6.8	0	94.2	68.4	83.7	83.4	64.84
Lewis C	74.9	0	90.0	36.8	0	93.0	87.7	76.1	92.4	61.21

District 2 - Rocky Mountain District

Colonel A. S. Peck has arrived from Washington and assumed his duties as District Forester.

On February 19 to 21, a meeting of about 30 members of the field force and District Office was held for the purpose of discussing some of the more technical phases of the work in District 2. The principal subjects taken up were:

Our Present Silvical Policy and its Justification.
Some Fundamental Characters of our Forest Trees.
History, Present Status and Future Possibilities of Planting.
Practical and Ideal Management of Lodgepole Pine.
Grazing in Relation to Forestry.
The Possibility of a Working Plan for the Black Hills and Some of the Technical Problems to be met.

The following conclusions were arrived at by the majority of the meeting:

1. In calculating returns from forest investments, the rate of interest to be used should be not higher than 4%.

2. No further general planting reconnaissance is recommended until the need for it becomes more immediate.

3. The policy should be continued of making forest plantations regardless of their justification in terms of dollars and cents returns.

4. A clear cutting system is preferable to the selection method for lodgepole pine where market conditions make such a system possible, always providing for adequate watershed protection.

5. It is preferable to make timber sales of tie trees only, as is now being done on the Medicine Bow Forest, leaving the larger sizes on the ground, rather than to hold such stands until there is a market for all sizes of timber.

6. In carrying out the expressed intent of Congress that the purpose of the National Forests is the protection of watersheds and the assurance of a permanent supply of timber, grazing should be considered a subordinate use.

Grazing should be restricted or prohibited whenever and to the extent that it endangers the perpetuation, extension or management, of the timber cover or the protection of watersheds; except that such concessions may be made to grazing use as will only slightly interfere with the accomplishment of these purposes, when clearly justified by the importance of the grazing use.

On the Michigan Forest of 1,452.7 acres of planting which have gone through one or more growing seasons, only 1% resulted in failure; 93% are successful, having over 300 trees per acre; 6% are partially successful, having from 100 to 300 trees per acre. Ninety-seven per cent of the Norway Pine is successful while of the White Pine 79% has over 300 trees per acre.

In the following excerpt from a letter Forest Ranger Davis indicates the march of civilization -- "*** an airplane flew over me on the Horseshoe-Idlewild Trail, my pack horse became frightened, ran away, throwing my pack out-fit off, breaking my trail saw and losing some of the rest of the equipment ***"
Can you beat It?

District 3 - Southwestern District

A land office agent recently gave the following reason on his expense account for using a taxi instead of a street car: "Reached destination at three in morning; snow-storm raging; thermometer below zero; hotel over one mile distant; coal strike on; militia called out; ----and the town had no street cars." We believe these reasons are nearly invincible. However, there may be a loophole.

District 3 - Southwestern District (Continued)

Forest officers who face the problem of how to build a livable house under the statutory limitation may be interested to know that in Albuquerque, as well as in other towns in this District, houses that are smaller and little better constructed than many of our ranger stations sell for around $5,000 and rent for from $40 to $60 per month, and in town you're lucky if you have enough yard for a small garden or a few chickens. Anyone unfortunate enough to be single must be content with paying, in the form of monthly room rent, at least ten cents per square foot for the space he occupies.

Choice washings from the ranger examination diggings:

"Who created the first National Forest?" Answer:

"The first National Forest was created by God and was afterwards enlarged by Theodore Roosevelt."

District 4 - Intermountain District

It frequently happens that laymen submit at least as satisfactory definitions of legal terms as lawyers themselves. As an illustration, the following answers are being quoted which were submitted by different Rangers in response to the question "What is hearsay?":

"Hearsay is punk evidence in legal proceedings; it won't kill dutchmen."

"Hearsay is the story the other fellow tells. In other words it is second hand information. Not positive evidence, just "I think so."

"Hearsay is gossip, no good for evidence in legal proceedings."

"When one person says I heard so and so say so and so that's hearsay."

Stumpage appraisal in response to an application has been received for 19,000,000 feet of timber on Pearsol Creek on the Payette. It is probable that there will be considerable competition in bidding on this timber.

Word has been received from the Wyoming Forest that the Commercial Club of Cokeville has arranged to furnish a lot upon which to construct a ranger station, providing funds can be made available. The report states that two individuals of Cokeville advised the Forest officers that they would personally procure the ground if the Commercial Club hesitated, but it turned out that they were not left to provide the site without assistance of their townsmen.

Supervisor McQueen states that the increasing interest of Idaho sheepmen in the Nevada winter ranges is very apparent from the number of old faces which he is meeting in Ely this winter. They explain their interest as having been stimulated by the excessively high cost of hay in Idaho the last few years. The possibility of getting by with feeding only 30 days and perhaps not at all looks good to them in comparison with the length of time feeding is necessary in Idaho. The regrettable fact is, however, that most of this choice winter range is already overstocked.

On February 10, Deputy Supervisor Mink accompanied Mr. J. D. Pence as far as Wells, Nevada, to confer with Mr. James P. O'Neil of the O'Neil Bros. concerning their assessment which has been levied on a part of their cattle and sheep preferences on the Humboldt Forest. The amount of the O'Neil Brothers assessment is $1,212.45 which is to go toward the construction of the Elk Mountain Drift Fence which will cost approximately $7000.00. The O'Neil Bros. have the honor of paying double the amount of any assessment levied on any stockmen using the Three Creek division. Mr. J. P. O'Neil has shown a hearty spirit of cooperation with the Forest Service and is back of us both morally and financially in any of our undertakings which lean toward the betterment of range conditions. The O'Neil Brothers have grazed stock on the Salmon River and Humboldt River watersheds for some 25 years and control about 20,000 or more acres of outside range which has never been overstocked and consequently looks better than most of the Three Creek division of the Humboldt Forest.

District 4 - Intermountain District (Continued)

Larry Phelan, who is engaged in the sheep industry along the Middle Fork of Salmon River, has appealed to this office for assistance in securing sheep herders, as the ones he has had have all gone on strike. While most sheep herders are supposed to be good walkers, apparently none of them know how to travel on showshoes and when they are informed that there is a fifty-mile snowshoe trip staring them in the face they say nothing doing. So it is quite apparent that Mr. Phelan is not finding the sheep industry on the Middle Fork altogether a bed of roses.----Challis News Letter.

Supervisor Grandjean reports a very successful allotment meeting with the Boise National Forest Woolgrowers' Association and other sheep permittees on the Boise Forest held February 14. The Woolgrowers' Association, at the conclusion of its meeting, adopted resolutions urging the addition of a considerable area of grazing lands to the Boise Forest, an appropriation of not less than $500,000 annually to the Biological Survey for predatory animal extermination, and a third resolution urging Congress to provide adequate salaries for the employees of the Forest Service.

The Tetonia Cattle and Horse Growers' Association, a recognized association on the Targhee, at a special meeting held February 7 at Tetonia, Idaho, adopted a set of resolutions memorializing Congress to provide salaries adequate to secure and retain a class of men for Forest officers who can effect efficient administration of National Forests.

A romance, in which a District office employee has figured, culminated yesterday in the wedding of Mr. T. Gilbert Reader and Miss Susie McDonald. Mr. Reader has been our blueprinter for the past year. We have not received this announcement with surprise, but on the contrary have been expecting it. Our good wishes and hearty congratulations are many and sincere.

Messrs. James E. Scott, R. B. Adams, and Alvin Johnson entertained about 800 Boy Scouts and a scattering of grownups at Weber College auditorium last evening. An illustrated lecture on the Forest Service was the first number on the program, given by Mr. Scott, assisted by Al Johnson on the projecting machine. A reel of motion pictures on National Forest recreation followed, and the program was concluded with a practical demonstration of the wireless telephone by Telephone Engineer Adams, assisted by Mr. Scott. The evening was quite successful. It is believed that the Scouts learned some interesting things about the Forests and the work of the Service, and Mr. Scott states that incidentally he learned that 30 minutes is plenty long enough to try to keep a bunch of healthy growing boys interested in an illustrated lecture.

At the annual meeting of the Santa Clara Stockmen's Association, recognized cooperative association on the Dixie-Sevier Forest, the method of tagging for counting purposes was discussed in detail. Due to the bad condition stock are usually in at that time of the year, and the possible loss through rough treatment in tagging, the Association was unanimous in opposing this method. This and the Gunlock Cattlemen's Association have gone on record as opposing the recent reduction in the protective limit established for their respective grazing divisions of the range. An explanation to the effect that this action was absolutely necessary in order to be in a position to provide range for strictly qualified new Class A applicants, is understood to have proven satisfactory in these two cases.

The Illipah Basin Oil Company is boring for oil on the White Pine Division of the Nevada Forest, and reports very promising indications at a depth of 300 feet. The showings are so good that stock advanced in price from 10¢ to 15¢ a share February 1. The Nevada force would like to get in on the ground floor, but owing to the H. C. of L., they have unanimously decided to dealy the purchase, not that they lack confidence in the project, however.

District 4 - Intermountain District (Continued)

A joint meeting of the Idaho and Payette Forest Advisory Boards of the Emmett-Payette N. F. Woolgrowers Association was held at Emmett January 29, at which time all applications for grazing permits in the Thunder Mountain addition were discussed. Applications covering 79,000 head of sheep were approved as to prior use of the range, that is, for three years before the inclusion of the range within the Forest. Applications for 16,000 head more were held in abeyance pending investigations and submission of further evidence. There are a number of preferred Class B owners who have used the range only one or two years and it was the idea of the Advisory Boards that the strict application of the three-year rule to them would work quite a hardship on these owners. A resoluti was therefore passed asking for an increase in the sheep allotment of 10,000 or 12,000 head to take care of these preferred Class B owners, It was agreed that if this additional authorization be secured, the effect upon the range of the increased number would be noted and if it was evident that there were too many sheep, every one in the District would take a cut to bring the number of sheep grazed down to 65,000, which is the number authorized at present. The meeting was characterized by a spirit of fairness and good will, which presents quite a contrast to meetings held a few years ago when every man was out for himself. The number of lawyers present at the meeting demonstrated that recognition is being given the legal status of the Service regulations and rules.

District 5 - California District

More About Salaries

At a recent meeting of the California State Wool Growers Association held at the University Farm, Davis, California, two resolutions were adopted which may be of interest to field officers.

The first of these was a resolution favoring control of grazing on the public domain under a system such as is practiced by the Forest Service; and the second one is - asking Congressmen to see that a sufficient appropriation is secured for the Forest Service to enable it to pay salaries to experienced men whic will be comparable to salaries received in private employment.

Range Improvements

A summary of the range improvements constructed in the District during the past season shows the following:

Drift Fences	- 43½ miles.
Pasture	- 18
Corrals	- 3
Stock Bridges	- 5
Salt Logs	-324

Since control of cattle is necessary in many parts of the District before proper methods of handling can be practiced and in order to secure real improvement in range conditions, the progress in drift fence construction during the past season is especially important. Cost figures were given for 18½ miles, of the total fencing done, showing an expenditure of $394.10 Forest Service range improvement funds and $4,225.96 by grazing permittees, or an average cost of about $250. per mile.

Water Development Projects

During the past season the following water development projects were successfully completed in District 5:

Spring development	- 63 Projects.
Reservoirs	- 6 "
Wells	- 2 "
Total	- 71 Projects.

Water Development Projects (Continued)

Definite cost figures were given for 16 of the above projects showing an expenditure of $5,313.54 from Forest Service range improvement funds and $595.50 contributed by stockmen. Of the remainder of the projects, for which no cost figures are available, 35 were completed entirely by grazing permittees, 10 were completed cooperatively by stockmen and contributed time of Forest officers, while 10 were completed by contributed time of Forest officers alone.

In addition to the above one pipe-line repair project was completed, log troughs were finished, but not installed, for four additional spring projects, and three well projects were started but not completed. One spring development project and one well project were failures.

This summary shows excellent progress for the District as a whole in this important grazing development work, especially in view of the labor situation prevailing last summer.

As near as we can tell from the reports, which are very meagre in many instances, log troughs are favorites and seem to give the most general satisfaction throughout the District although the increasing use of concrete troughs is evident.

Fire

E. I. Kotok, Supervisor of the Eldorado for the past four years and previously on the Shasta Forest, has been transferred to the District Office and assigned under Operation to fire work. Kotok's job will include fire cooperation, fire organization and the correlation of research work to the administration of fire protection. He assumed his new duties immediately following the Supervisors meeting and has already outlined a vigorous campaign to secure additional fire cooperation from the various lumber companies and owners of lands within and directly adjacent to the Forests of the District.

Supervisors' Meeting

February 2 to 5 inclusive witnessed the annual Supervisors' Meeting for District 5. It was a short meeting but it was a snappy one. The program was gotten up by the Field Advisory Committee composed of Messrs. Benedict and Rogers and as the meeting proved, this program covered the field thoroughly and at the same time kept entirely away from routine and detail matters.

Needless to say the news of promotions received from the Forester's office just in time for the meeting did much to increase the feeling of hopefulness and of the desire to tackle with renewed vigor the many and various problems facing District 5 during the coming season. This feeling was greatly strengthened by the opening remarks of District Forester Redington, who for the first time since his assignment to the California District had the opportunity of meeting every Supervisor in the State.

The meeting was declared a huge success and its results will without question show in both quality and quantity of work to be turned out during the coming season.

Fire Protection Under the Weeks Law

A preliminary conference was held in the District Forester's office Saturday, February 7, to outline with State Forester G. M. Homans plans for fire cooperation under the Weeks Law in California in 1920. After a thorough discussion of the cooperative agreement in force during 1919, an agreement which Mr. Homans characterized as rather unsatisfactory in that it was too restrictive insofar as funds were concerned, it was tentatively agreed to figure for 1920 on more intensive protection. Since under the Weeks Law protection is confined to the head waters of navigable streams it will be necessary to confine protection efforts outside the National Forests to the watersheds of the Sacramento and San Joaquin Rivers. This is, of course, a comparatively small proportion of the State and in the way California differs very greatly, it is understood, from many of the other States receiving Weeks Law Funds.

District 6 - North Pacific District

The Pacific Coast department of a well-known insurance company is now writing policies upon standing timber in Oregon and Washington west of the summit of the Cascade Range. Policies are issued only upon yellow, red, and Douglas fir, spruce, cedar, and pine of merchantable size, that is 16 inches or better on the stump and free from dry rot or other defects. Timber in inaccessible locations or which cannot be logged profitable, timber exposed by old burns or slashings, or upon tracts where logging operations are going on, will not be insured. Neither will small isolated tracts be considered, unless accessible to logging stream or railroad. The insured value may be fixed at any amount up to full actual value per M feet. The basis rate is $0.25, with an additional charge of $1.25 for the dry season in the case of timber owners and $0.50 additional for timber bond holders. Timber located west of range 4 west, Willamette Meridian, Oregon, and west of range 3 west in Washington is subject to a 33 1/3 per cent deduction for approved patrol warranty.

The formation of a livestock board for Deschutes County, made up of members of the various cattle and sheep associations, has been decided upon by the local stockmen. The object of this joining of forces is to control range conditions more effectually than they have been controlled by the various associations working separately; decision to have a county livestock board being based on the realization that small units cannot work as effectually as one large body. The new board hopes to curtail losses through disease and death (which in past years have sometimes reduced the value of their herds ten per cent) and to restrai unlawful killing of cattle and sheep on the ranges and sale of the meat and hides in nearby towns. Rigid inspection measures will be recommended to the councils of the various towns in central Oregon. It is expected also that through this board a better method of handling estrays will be established.

A supervisor of the district found women lookouts whom he employed during the war period so successful in discovering and reporting fires that he announced his willingness to employ them for the 1920 season, whereupon many women showed themselves eager for such appointments. A letter written to one of the Portland dailies questioned the fitness of giving such positions to women instead of to ex-service men, and the paper answered the letter in an editorial comment which expresses the opinion that there will be work for all next summer in helping to produce the wealth which is to pay the war debt.

A Coos Bay fir (Siuslaw Forest region) yielded 43,280 feet of merchantable timber. It was cut into six logs, the largest of which was 90 inches in diameter and the smallest 65 inches. The six logs placed end to end had a length of 174 feet.

Flu has been retarding the work of the District somewhat, though not to the extent that it did last year. A letter dated February 13 from the headquarters of the Cascade Forest informed that the supervisor, the clerk, and a ranger were ill with it at the same time. It has appeared on other Forests also, while several members of the District Office have had it.

Cattle grazed on the Deschutes recently brought, at the shipping point, three cents above the market price.

February 1, 1920, there was no snow at Beaver Ranger Station, Deschutes Forest. This circumstance derives its interest from the fact that on February 1, 1915, '16, '17, '18, and '19 snow measurements here showed respectively 6, 35, 23, 2, and 6 inches.

The McKenzie River Highway, after the Columbia River Highway perhaps the most scenic in Oregon, has been covered recently by Mr. Cleator, who inspected camp sites that are to be developed for 1920 recreation seekers.

About $4,000 worth of wireless telephone equipment has been received from the General and Western Electric Companies, which will be used in making tests between the District Forester's headquarters, and various other points. It is expected to carry one set to Larch Mountain, 25 miles away, and after trying it out there move it to several other points in order to get a line on the effective range over which instruments are practicable. A mast and aerial have been erected on the Post Office Building and a set of instruments set up. Successful tests have already been made between the Post Office and residence of Charles Austin, port radio inspector for Portland, over a distance of about four miles.

District 6 - North Pacific District (Continued)

Governor Olcott has proclaimed a Forest Protection Week for May 23-29, 1920, when the importance of Oregon's forests, not only to the lumber industry but as protective cover for municipal watersheds and as recreation grounds for the people, will be emphasized, together with the great necessity of giving these forests complete protection from fire and misuse of all sorts.

At this late day discovery has been made that maples the pioneers planted as shade trees are sugar producing. A Gaston farmer, who came to Oregon from a maple sugar State, tapped 30 trees on his place, and got about a gallon of sap a day from each of them. He has had this sap tested and says that it turns to sugar of fine quality.

Warren M. Cooper died February 18, at the Willamette Boulevard Sanitarium, of sleeping sickness (as nearly as the malady could be diagnosed). It is with deep regret indeed that this announcement is made. At the time of his death Mr. Cooper was a ranger on the Oregon Forest, stationed at Parkdale (Hood River district). He had been in the Forest Service about 18 years, entering first in 1902 as guard. He had been a ranger from April 1, 1905. He was 44 years of age. Mr. Cooper's wife died during his own illness; of this he never knew. A 7-year-old boy is left.

A wire received from Portland, as the Bulletin goes to press, states that Forest Ranger C. E. Bullen of the Snoqualmie Forest was killed on February 27 at Darrington, Washington, while scaling logs. No details are available at this time.

District 7 - Eastern District

Assistant District Forester Stabler left this week for Camp Bennings, Georgia, to work out a plan with the Commanding Officer for taking care of the forest land on the property, which consists of about 100,000 acres. Before returning to the District Office Mr. Stabler will also visit the Alabama and Pisgah Forests.

Last week at Gorham, New Hampshire, the headquarters of the White Mountain National Forest there was staged a Winter Sports Carnival which was not only a great success but which demonstrated the all-the year-round possibilities of the White Mountain Forest as a playground quite equal to Saranac and Lake Placid in the Adirondacks. Hundreds of people came to Gorham for the Carnival and several film companies were present to take moving pictures of the sports. There was Ski jumping and Snow Shoe races and ice skating; the Ski jumping contest taking place on Mount Madison to which spot the visitors tramped in throngs. At night the carnival continued on the ice rink, the skaters appearing in costume. Among the visitors to the carnival was Mr. A. T. Walden, who travelled through the Forest over the mountains from Wonalancet to Gorham with his six-Alaskan-dog team and sled. Supervisor Fritz will probably have a more detailed description of the Carnival for a subsequent number of the Bulletin.

Plans are underway for the development of a working plan for the future handling of the buffalo on the Wichita Preserve. This promises to be an extremely interesting study and will doubtless result in obtaining some highly desirable data. There is at the present time no information at all regarding the age to which buffalo live, that at which the female bears calves, or any of a number of other points. Conditions on the Wichita are such that a study can be made of the animals without difficulty and it is probable that a system of keeping records of each member of the herd will be developed. It is felt by the Biological Survey that no limit should be placed on the size of the herd, but that it should be allowed to increase up to the carrying capacity of the preserve.

District 7 - Eastern District (Continued)

Lands, Acquisition

Examiner of Surveys, Muzzey has been transferred from the White Mountains to the Cherokee Area to make the survey of lands which have been approved for purchase there.

Transitman Riemer has been transferred from the Savannah Area to the Georgia to survey the tracts which have been recently approved for purchase.

Owing to the winter weather conditions it has been necessary to temporarily withdraw Examiner of Surveys Sullivan from the Monongahela Area, where he was assigned to the survey of 24,000 acres of land, and detail him to the Asheville Office for miscellaneous office work. When weather conditions permit he will return to the Monongahela to complete the work to which he was originally assigned.

In a race against winter Acquistion-Surveys was successful in completin the survey of the boundaries of nine tracts in the White Mountain Area, aggregati approximately 32,000 acres of land. These cases are now being put in final form for the use of the Solicitor in completing the title examinations.

With the return to normal conditions it is the purpose of Acquisition-Surveys to complete the surveys and descriptions of all lands within six months after they have been approved for purchase. This was the pre-war standard and it is hoped that the record established then can be successfully met from this time on. The average time required to complete all cases before the war from the date of approval for purchase was two and one-half (2½) months. In no instance did it require more than six months to complete any one tract.

Forest Assistant Courtland S. Winn has been transferred from the Natural Bridge Area to the Unaka.

Forest Assistant William P. Kramer has been transferred from the Pisgah Area to the Ozark.

National Forest Examiners C. E. Beaumont, H. S. Davis, and Herbert A. Regan, who have been on detail to the Washington office, have returned to their respective headquarters.

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

March 8, 1920.

Col. Graves and Mr. Potter to Leave Forest Service

Col. Graves, on March 8, made known his intention of resigning from the Forest Service about May 1. The announcement was made simultaneously by Secretary Meredith before the Senate Agricultural Committee and by the Forester to the members of the Washington Office.

On the following day came the announcement of the resignation of the Associate Forester, to take effect April 15. This was made known through a memorandum of the Forester to members of the Forest Service, which will be found on pages 2 and 3 of this issue of the Bulletin.

In announcing to the Service his own resignation, the Forester said:

"It has been with great reluctance that I have recognized that it would be my duty in the near future to complete my work in the Forest Service. I have taken the completion of ten years service at the head of the organization as the occasion to take the step.

"There are two chief considerations that have brought me to this decision. The first is a personal one, relating to my health; the second concerns the problem of the conditions of employment in Government service.

"Something over a year ago I had called to my attention very sharply that I could not indefinitely continue the pace that I had been going for ten years. A second warning came during the summer while I was in the field. Fortunately, by taking a brief respite in the fall I was able to 'come back,' and would be able without question to carry on for some time without difficulty. Nevertheless I know perhaps better than any one else what the drafts are upon one's strength, if he is to perform with effectiveness the tasks of chief forester. It would be quite possible to organize the work in such a way as to ease up this strain, especially by reducing the field trips and public conferences in different parts of the country, and undertaking less in the way of such new work as the national policy of forestry. I feel, however, that especially during the next five or six years, there must be a most intimate touch between the chief forester and his men and a personal leadership in general forestry matters outside the National Forests. I feel it my duty to myself as well as to the Service to make a change before my full working powers and efficiency are impaired. It has therefore been a question with me of choosing the right time. It is clear to me that now, before the opening of the field season, is that time.

"I have been ambitious before retiring to accomplish several things. The first was to bring our organization through the war, to do our part in the war, to do our part in service in France as well as here, and to continue to carry on through the war the public undertaking for which we are responsible; and then to get the organization back into full working condition for the readjustment period and the new problems that we have before us. We have already set in motion a considerable reorganization throughout the Service, and while a good deal yet remains to be done we have at least laid the foundation for an organization that will meet our new tasks.

"I was ambitious also to set in motion a reconstruction program to meet the needs of the country in forestry beyond the National Forest work. We have launched a new movement in forestry that will in the long run be as important as that of the National Forests. We have built soundly and the movement can not be stopped.

"I was ambitious further to do what I could toward securing recognition of the needs of our service in the matter of conditions of employment. There is no one who realizes better than I what the present situation is in the Forest Service. I have been around the country. I have gotten the first-hand story of scores and scores of our people; I have gotten the second-hand story of the balance. Something has got to be done which is more drastic than what can be secured by our ordinary yearly pleading for help. We must secure the aid first of those above us and then of Congress.

Col. Graves and Mr. Potter to Leave Forest Service (Continued)

"We have been able to bring about some readjustments in salary this winter, especially on the lump fund roll. The two appropriation committees have further granted a modest relief to the supervisors and rangers. We have not yet succeeded in securing any readjustment to give justice to a large number of other persons on the statutory roll, whose needs are keenly appreciated. But such changes as we have secured are on the basis of a pitifully low standard of remuneration, especially under present day conditions.

"No permanent readjustment is possible until there is recognition of the importance and responsibility of the work of the Forest Service and the whole standard changed. That obviously must begin at the top. If I remain here in acceptance of the situation, certainly we can not expect others to realize its urgency. I am in hopes, therefore, that the move I am making may result in calling attention to the fact that the Government can not expect men to remain indefinitely in positions of such great responsibility as the Chief Forester and scores of others in the Forest Service at the present standards of remuneration. In short, I want my retirement to contribute in a way to a betterment of the conditions of all. Secretary Meredith, I may say, is of a like opinion and he is using my letter to him about my resignation as a text to call attention to the needs of the Service and whole Department.

"I am not leaving the Forest Service merely to take some new position. My first task will be to get a good rest and do some things which I have deferred for ten years or more. After that I shall consider how I may contribute to the advance of forestry, which will continue to be my chief object in life.

"This is not a farewell talk. It is only to explain the conditions that lead to my decision to retire in the near future, a decision that has already been publicly announced.

"It is probable that I shall sever my official connection with the Service about May 1."

The announcement of Mr. Potter's resignation was as follows:

"A few days ago I received, to my great regret, a letter from Mr. Potter expressing a desire to be relieved of his position in the Forest Service. I did not announce this yesterday as I felt that the move is of such importance as to call for separate consideration, and that it should not appear to come as an aftermath of my own retirement.

Mr. Potter has performed a great service during his long connection with the Forest Service. His loss is greater than can be measured, and will be profoundly felt. It is with a keen sense of this that I communicate to you the announcement of his resignation, and request your attention to the attached official letters that have passed between us.

HENRY S. GRAVES."

Copy

March 3, 1920.

The Forester,

Washington, D. C.

Dear Colonel Graves:

For some time past I have anticipated retiring from the Forest Service whenever it seemed possible for me to do so without leaving undone anything which involved either an official or moral obligation upon me to complete.

When I entered the Government service in 1901 at the request of Mr. Pinchot, I did so with the feeling that there was an opportunity for public service in bringing about a better understanding between the stockmen using the public ranges and the department officials charged with their administration, as well as in working out a constructive plan of range management which would give stability to the livestock industry and secure the cooperation of the stockmen in better accomplishing the objects for which the National Forests were established. The success which has been attained by the men in the Forest Service, with whom it has been my good fortune to be associated in this work, is extremely gratifying and a record has been made in which I think we may all take pride.

The system of regulated grazing in operation upon the National Forests has been endorsed almost unanimously by the stockmen using these ranges and is now well established. A friendly relationship exists between the stockmen and the officers of the Forest Service which insures a successful continuance of the constructive work which has been done during the past fifteen years.

I feel therefore that the time has now arrived when I should retire from the Government service and give my attention to private interests. Accordingly, I am tendering my resignation, effective at the expiration of April 15, 1920, with the request that it be accepted.

Very sincerely yours,

(Signed) A. F. POTTER,

Associate Forester.

Copy

March 8, 1920.

Mr. Albert F. Potter,

Associate Forester, Forest Service.

Dear Mr. Potter:

It is with a great deal of regret that I have received your letter of March 3, tendering your resignation from the Forest Service. Coming just at the time when I felt it my duty to inform the Secretary that I should have to finish my own work in the near future, I can not urge you to change your mind. I feel, however, that I must suggest to you the possibility of deferring the date of your retirement in order to give ample time to make such reorganization and readjustments in the Service as may be necessary to prepare for the field season.

Your retirement will be a very great loss to the public service. The work that you have done in building up a system of management of the National Forest ranges is a gigantic achievement. One of the most perplexing problems connected with the organization and handling of the National Forests was connected with the grazing of livestock upon them. Previously millions of head of stock ranged over the western mountains without any regulation whatsoever. The ranges were overgrazed and abused. Not only was their carrying capacity constantly deteriorating, but dangerous erosion was starting in a multitude of places, which, if not checked, promised disastrous results to the agricultural and other industries dependent upon water. It was your work which built up a regulation of the National Forest ranges, and substituted orderly use for the chaos which existed before. The system now in effect will be a monument for which you may well be satisfied and of which your friends will be proud. It rests upon a foundation so secure and substantial that you may have every confidence that it will continue unshaken.

I know that your leaving the Service will not end your work in connection with the public grazing matters. I hope that you will be so situated that you can keep in touch with the National Forest work and lend your support to the public problems that come up in connection with it.

Very sincerely yours,

(Signed) H. S. GRAVES,

Forester.

Washington Notes

E. E. Carter left last week for a six weeks' inspection trip of the Appalachian and Arkansas Forests.

C. Gilbert Rogers, Conservator of Forests for Burma, called at the office during the past week to secure assistance in carrying out a plan for training a number of logging engineers for the Indian Forest Service. The plan as decided upon contemplates having the students, who will arrive in April, spend at least one year on active logging operations in various parts of the country. The party will assemble at Asheville and spend a couple of weeks in getting familiar with the species of the Appalachian region. Later groups of three or four men will be assigned to logging jobs for several months. The same plan will be followed for the longleaf, cypress, Inland Empire, Douglas fir, and California pine regions.

The Indian Forest Service, Mr. Rogers stated, desires to open up some large tracts of timber which have thus far been practically untouched, and for this reason is going into the logging game. Two American logging engineers, Messrs. Lafon and Martin, have already been engaged. The thirteen men who are to be trained are either civil or mechanical engineers and the plan has been made with a view of enabling them to supplement their experience by a close up study of logging railroads and mechanical logging devices.

Suggestions as to operations which can be visited profitably, the time to be spent in each region, etc., were made to Mr. Rogers, and practical problems relating to timber sale procedure which have arisen on the National Forests were outlined.

Lieut. Aron, in charge of the forestry course being given at the Marin Corps Camp, Quantico, Virginia, and five students, came in last Saturday to get acquainted, and to secure information on various subjects.

A. H. Cousins, Property Assistant, is in Washington on a detail.

C. G. Bates is in Washington on detail in connection with his work as Silviculturist in charge of the Fremont Experiment Station at Colorado Springs, Colo.

District 1 - Northern District

"You see a lot of fires get away because a new feller on the job, anxious to make a rep.,phones in that the fire is under control. Then he goes t another and does the same thing. Now, an old timer in the game knows a lot mor about this fire fighting. One feller I knew told the head man this:- "I have plenty of grub, plenty of men, plenty of fire;- what the ..... more does a man want?"

The Blackfeet Forest has succeeded in selling lodgepole pine in the vicinity of Radnor for the manufacture of laths. A small lath mill is to be established on the State Land Exchange Area, and doubtless additional timber will be purchased as soon as a market for this product has been created. This operatio will be watched with a great deal of interest, since its success would doubtless result in considerable activity in the hitherto unexploited lodgepole pine, vast areas of which are contained in the Forests of this District.

Deputy Supervisor J. H. Clack of the Bitterroot Forest and Andy Hjort, Deputy Game Warden for the State of Idaho, have returned from a snowshoe trip to the headwaters of the Selway River where they went to investigate alleged violations of the game laws in that region. While in Hamilton, these officers were interviewed by trappers who exhibited permits from the State Game Warden of Ida to hunt and trap predatory animals within the boundaries of the Selway Game Preserve. Mr. Clack's story of the trip follows:

"Though we left Hamilton at daybreak, fresh tracks in the snow at the mouth of Blodgett canyon showed that someone was ahead of us, and future developments indicated that this messenger carried a warning of our visit to the trappers. We camped that night at the head of Blodgett, but the party ahead of us had crossed the Pass which is on the State line. Next morning we crossed the Pass and started down Sand Creek, following a snowshoe trail. After following the trail for a few miles, we crossed the Gulch, suspecting that the men we were after might try to dodge us. About a half mile from the main trail, we found fresh snowshoe tracks heading for the Pass. Evidently the suspected parties had reached the Pass early in the morning, and waiting in ambush until we passed, immediately crossed into Montana. However, we continued down the creek to big Sand Lake where we found the main camp, which had been recently abandoned. We found the ashes of a big fire in front of the cabin, and as about ten inches of light snow had fallen during the night, we knew the fire had been kindled after the snowfall. On digging in the ashes, we found several chunks of unburned moose meat with the skin and hair still on. In the snow nearby where a pole was swung between two trees, we found a section of moose ribs about two feet square. On running out the trap lines, we found some traps baited with moose meat, some with parts of grouse, and a number with fish, which had been caught through the ice of Sand Lake, which also constitutes a game violation in the State of Idaho. There was no sign of trapping for predatory animals, all the traps being set for marten and mink, and two marten feet were found at one of the camps."

Mr. Clack reports an abundance of snow in this watershed, and thinks the season's water supply should be ample from this drainage.

A storm of protest has arisen against the action of the Forest Service in requiring that the timber on the Callahan Creek Chance on the Kootenai Forest, be cut by a new sawmill to be located in the western portion of the Forest, and the Forester has decided to make no award of the timber until further investigation has been made of the general situation. The reasons which prompted the Forest Service to readvertise the timber on the basis of the establishment of a new mill were (1) the quantity of timber available which was sufficient to maintain a reasonable-sized mill indefinitely; (2) the advisability of securing competition for government timber which is not now possible, because the Bonners Ferry Lumber Company controls practically all of this region; (3) the large holdings now controlled by the Bonners Ferry Lumber Company.

It seems good public policy to introduce a little competition and to further the management of the Kootenai National Forest by securing a mill which could cut the timber in that vicinity and be sustained on a permanent basis.

Logging Engineer Girard is in charge of a party cruising timber on Canuck Creek, Pend Oreille Forest, and two drainages on the Kootenai Forest which drain into Canada. Approximately 150 million feet of timber are involved, which have been applied for b y the lumber department of the Canadian Pacific Railway. This company has a mill at Yaak, B.C. and is now conducting large logging operations in that vicinity. The timber included in the proposed project is located on drainages which are directly tributary to the company's operations in Canada. Both an estimate and appraisal of this timber will be made.

A Forest officer on the Kaniksu has petitioned to be relieved of his woolen underwear, socks, watch and safety razor. He does not contemplate transfer to a warmer climate, nor has he fallen heir to a fortune. His petition is neatly typewritten on Form 858 and is in accordance with the Property Auditor's letter of Sept. 2, which states that it is necessary for Property Custodians to be formally relieved of these items. It is suggested that it might be possible to devise a simpler and less embarrassing method of accounting for items of commissary furnished temporary employees.

H. R. Flint, Forest Supervisor of the Kaniksu Forest with headquarters at Newport, Washington, has been making a study of the feasibility of using dirigibles for fire fighting in connection with the airplane patrol, and is ready to demonstrate the practicability of this method of transporting fire fighters to the scene of action.

District 1 - Northern District (Continued)

Frank J. Klobucker, fire assistant on the Selway, will be assigned to the Office of Silviculture in the Department of Logging Engineering about May 1. In the meantime, he will assist in perfecting the fire organization on the Selway.

R. E. Gery, Assistant District Forester in charge of Lands, District 4, with State Land Commissioners I. M. Nash and Ben E. Bush, from Idaho, met in conference in the District Office of Lands February 18, 19, and 20, concerning the surveyed school sections within the National Forests of this District in Idaho which are scheduled for exchange under the proposed agreement. It was agreed that the State would exchange three sections in the Coeur d'Alene National Forest, seven in the Pend Oreille, two in the Kaniksu, two in the Nezperce, and seven in the Clearwater. Supervisors of the Forests involved will be requested to submit reports on the particular sections which the State desires to exchange in the near future.

G. M. Vandyke, after many years service as ranger on the Pend Oreille, has resigned his position, effective March 15. Mr. Vandyke will engage in the timber business, for which he is well fitted by reason of his long and varied experience in his line.

The District Office regrets to announce the resignation of Supervisor R. E. Bodley of the Gallatin Forest, effective March 1. Mr. Bodley has been in the Forest Service since July, 1913, and since May, 1915, he has been Supervisor of the Gallatin Forest with headquarters at Bozeman. Mr. Bodley's broad education and excellent general training have enabled him to give the Gallatin an exceptionally strong constructive administration. Mr. Bodley's new work will be in the expansion of irrigation and road systems in the interests of agriculture, which will enable him to cooperate with the Forest Service in the conservation of the Nation's resources, while the salary which the new position carries is more nearly commensurate with his ability. Mr. Bodley has the best wishes of his Forest Service associates in his new field of endeavor.

District 2 - Rocky Mountain District

The Supervisors' Meeting for the Rocky Mountain District, held in Denver from February 24 to 28, was a success in every way, and pronounced by everyone as being one of the best meetings to appear on the register. We were especially fortunate in being favored with a number of visitors from the Washington Office and other Districts, and the valuable assistance contributed by them operated to make the meeting one of Inter-District and Inter-Service scope, rather than restricted to the problems characteristic of the Rocky Mountain District.

The possibility of securing air service patrol in our fire detection scheme was one of special interest and it is hoped our visions may materialize in the not far distant future.

The progress made in the study of wireless telephony in the meeting of Service requirements was fully reviewed and the results thus far achieved are sufficient to warrant high hopes that in "wireless" will be found the panacea for so many of our communication needs.

The smoker given on Friday evening was not the least of the outstanding features of the program, and removes all doubt from the minds of any visitors, if any doubt existed, that our old line Supervisors who have been on the firing line for a decade and a half are losing their pep. The ready wit and keen originality demonstrated conclusively that work in the Service operates like a bath in the pool of perpetual youth to keep old men young.

The following are a few of the resolutions prepared by the various committees and passed by vote of the Supervisors in conference:

House Allowance:

For Forest officers in towns where there are no stations, the amount should be based on the average rental costs for each locality.

Ranger Stations:

Ranger headquarters should be so located as to allow of social and educational advantages to the Ranger and his family. It is assumed that he will be at a station in the field during the field season.

Ranger's Family:

The Ranger's family should be considered of paramount importance, and every consideration given to them in location of Rangers, even at some seeming sacrifice of Service interests.

Appropriation for Ranger Stations:

The limit on Ranger Stations should be raised to a point that will permit us to supply living facilities equivalent to those of the average man of equal salary.

Education:

We favor direct instruction methods and to supplement these, correspondence courses where necessary:

Where the correspondence method is used, we favor the use of concrete cases; i.e. the development of a knowledge of fundamentals from the questions asked and by work done,- not simply memory training.

We favor the giving of courses during slack periods.

The courses offered should be planned with the idea of benefit to the Service primarily.

Care should be taken in the selection and planning of the courses, so that only essential ones be offered.

Delegation of Authority:

In order to facilitate business on the Forest and meet the increasing demand for quick efficient service to the public it is recommended that the necessary changes be made in the Regulations and Instructions so that Supervisors in their discretion may delegate authority to Rangers to issue special use (free) permits for the following special uses: corrals, stockmen's, miner's and prospector's cabins; trails, roads, bridges, dipping vats.

Cooperative Buying:

The formation of a cooperative-buying association with a small capital whereby its members may purchase, through a central purchasing agent, groceries and other commodities at wholesale prices.

Research:

Make progress reports available to all field men from time to time during the life of the experiments in order that any tentative conclusions to be drawn from the experiment may be put into effect, thus making it possible to formulate the manner of application, test its practicability and, perhaps, assist Research in drawing the final conclusions and results. This will often allow extension of the investigative work to new fields unknown to Research and will broaden the viewpoint of the field men.

District 2 - Rocky Mountain District (Continued)

Major Kelley, assigned to general fire work of all the Districts, spent two days at the Supervisors' Meeting and gave a talk on law enforcement.

Telephone Engineer H. R. Kylie sent out music by wireless last week in order to determine what range could be secured due to some changes made in the apparatus. Found that they could hear our music at Colorado Aprings, 70 miles away, with the Signal Corps 10-mile sets.

With the increase in size of the Forest plantations on the Nebraska Forest, the grouse and prairie-chickens in that country have acquired a taste for pine buds, and each winter it is necessary to use various means to keep them from inflicting considerable injury upon the seedlings and transplants in the nursery. Recently a grouse was accidently killed at the nursery and examination of its craw showed a content of about 1¼ ounce of pine buds and needles. The only other substance besides the pine needles was one wild rose bud. This represents the damage which a single grouse can do in the course of several hours and it gives an idea of the damage that several hundred can do to the young trees both in the nursery and pine areas.

The Spanish Peaks Mountain Playground Association which, heretofore, has been relying on the appropriation of County money for the financing of recreational development of their section of the San Isabel National Forest are now organizing on the same basis as the San Isabel Public Recreation Association. The Spanish Peaks Playground Association is incorporating as a corporation not for pecuniary benefit and it is understood that the stock is to be the same as the San Isabel which is $100,000.

As evidence of the increased recognition of the National Forests as playgrounds for all the people, a recent development on the Colorado National Forest represents an illustration. The small town of Black Hawk, a mining camp, which is typical of most such settlements in the hills, is planning on developing a campsite for the use of its own citizens and tourist guests. This settlement is in the heart of the hills and it would seem that the citizens would not demand development of any mountainous land as recreation grounds. This small community, however, has taken up negotiations with Supervisor Wheeler of the Colorado National Forest for the development of an area known as the Cold Spring Camp Site. At the present time the community is planning on financing the movement and asks the Service only for plans and the privilege of making the development.

Forest Supervisor C. G. Poole of the Washakie National Forest has been detailed to Operation in the District Office.

A rather unusual application for employment was received the other day. The applicant gave his age as twenty-two years. During these short twenty-two years, the applicant stated he had done the following things: graduated from college; put in six months at logging, four years at farming, seven years at stock raising, over a year on carpentry work, six months as a mechanic, a year and a half as machinist, six months as telephone lineman, seven months on surveying, and two years on office work! We'll say he started career-ing rather young!

District 3 - Southwestern District

Choice washings from the ranger examination diggings:

"What supplies, etc., would you take for a two-weeks camping trip in the mountains?" Answer: (by an Arkansawer) "A riding saddle, a gum coat, and $7.00 in currency."

Fuel and time-saving devices such as pressure cookers and fireless cookers should engage the serious attention of not only batchelor field men, but also the benedicts who face the daily turn on the family wood pile. For instance, picture a pressure cooker: Can you imagine the satisfaction of our lone ranger on squaring up to a fragrant mess of frijoles, thoroughly done, say forty-five minutes after he arrives home after a meal-less day in the open? This, of course from the raw bean condition. Even better, a steaming mulligan with a few tough joints of meat cooked to a turn, fresh from the fireless cooker where they had been placed in the morning after being started on the breakfast fire. There's a flavor in these styles of cooked foods that can't be equalled by the open kettle method and surely none of us duck when good food comes our way.

P. S. Our old fuel-consuming friend altitude has absolutely no say in the elapsed cooking time of these devices, so our advice is good for sea level or the top of Gold Hill lookout on the Carson.

Newspaper and other sources of information indicate that the long contemplated reclamation project at Alma on the San Francisco River inside the Gila boundary is coming to life. A first form of Reclamation withdrawal of all lands in the vicinity of the proposed reservoir site is practically consummated; a Reclamation Service engineer has arrived in Silver City; requests for cribbing and other timber have been made and information that a reconnaissance survey party of considerable size will shortly be on the ground, all point to an advanced stage of action on this work.

The result of building this dam will be twofold. Large areas of new farming land will be developed in Greenlee and Graham Counties, Arizona, and also present Gila Valley farmers below the mouth of the Frisco will be much interested. In addition, abundant and cheap electric power will be developed and made available for the rich mining district around Mogollon hitherto working under the limiting handicap of expensive oil fuel hauled over eighty miles of mountain road.

Observations over a long period of years have shown that great numbers of yellow pine seedlings are killed by ground heaving. The damage takes place between late fall and early spring, and is most severe in winters of light snowfall. The present open winter gives cause for concern for the safety of the large seedling crop on the Colorado Plateau. On the Coconino about one-third of the ground surface in the yellow pine type is now bare. Examinations at the Fort Valley Experiment Station show a loss of from 25 to 50 per cent on bare spots. Usually the root is broken off two or three inches below the ground line. Plants which have been lifted as much as one inch, even though not broken, will die from stripping and exposure of the roots. Although the injury is confined almost entirely to first-year seedlings, some as old as three years are destroyed. Seedlings growing in bunches of grass or weeds have suffered less than those on bare ground. Areas still under snow have suffered but little, and are comparatively safe unless an early thaw should set in.

G. A. PEARSON,

Forest Examiner.

Some time ago Ranger Robert S. Blatchford of the Datil made the suggestion of using picture postcards showing the damage done by forest fires in place of the usual fire letters sent out by Supervisors. This idea has been adopted as an experiment, and a requisition placed with the Forester. Supervisors who are planning to get out fire-letters are therefore requested to hold up their plans until the Forester wires whether we can get the postcards in time for this fire season. The card will show two scenes on the back, one of a heavily timbered slope, the other of a similar slope denuded and gullied, with the following inscription underneath:

"A Forest Fire
Can Turn
This timbered slope into this denuded waste."

On the address side will be a brief message requesting the permittee to cooperate with the Service during the coming fire season.

District 3 - Southwestern District (Continued)

A report has been made to the Albuquerque Chamber of Commerce on the inspection of tree plantings made last year in that city. Quincy Randles of the Forest Service was technical advisor of the tree-planting commission and with the County Agricultural Agent, made the inspection. Black locust and elm were the two principal species planted. The average survival of trees planted was better than 92%. Locust made the more rapid growth of the two. Indications point to considerable more planting this year. This is a good community project for Forest officers to push in other southwestern towns.

Say, D-1, after the inmates of your special use jail are released, send them down here and we'll reform them in our special use church or bury them in our special use graveyard.

Forest Ranger Fred H. Miller, late of the Zuni District of the Manzano, left Albuquerque this week on his way to Porto Rico where he will assume the position of Assistant Forester under the Bureau of Insular Affairs, at an attractive increase in salary. Mr. Miller graduated from Cornell Forest School in 1916. He spent the succeeding year with Engineering in the District Office and from August 1917, until August 1919, was with the 10th Engineers, coming out a lieutenant.

Judging from his excellent record in this District, we congratulate Porto Rico on securing a man of Miller's caliber.

This is the third man that this District has contributed in the past few months to distant lands - one each to the East and West Indies, and one to Africa. In addition, we have since November 1 contributed a Forest Supervisor to each of Districts Five, Six, and Seven; a District Forester to Five and a Forest Examiner to One.

The Apache Trail - as the road from Globe to Phoenix via Roosevelt Dam is known - has long gone to wreck and ruin because of popular indifference. Now efforts are being made by the counties, the Water Users' Association, and other interests to work out a joint plan for repairing this famous highway and keeping it in good order.

Due to Mrs. Reindorp's finding the climate of California more agreeable to her health, we are sorry to announce that Ranger Reindorp will shortly leave the Santa Fe to accept a new assignment on the Cleveland Forest. Reindorp has been in the District since 1907 and in leaving here his many friends in the Southwest are wishing for him the best of success.

District 4 - Intermountain District

During the calendar year 1919, 27 trespass cases were reported on the La Sal Forest. The number includes one property trespass, one timber trespass, and 25 grazing trespass cases, one of which was a willful case. 386 head of cattle, 3225 head of sheep and 40 hogs were involved in the grazing cases. $957.47 has been collected by voluntary settlement. Seven more cases involving 24 head of cattle and damages in the sum of $30.24 were not acted upon, the evidence being insufficient, or the amount of damages involved negligible. Only one trespass case, which by the way occurred after the end of the grazing season, remains to be settled, and it is believed a speedy settlement will be secured as soon as the report is gotten into proper shape. Eight cases reported during the latter part of the calendar year have been settled by the Supervisor's office in accordance with the amended instructions regarding settlement of innocent trespasses.

We had our severe weather in the early part of the winter this year. At Thanksgiving time everything indicated that we were going to have a very great depth of snow and very cold weather. However, very little snow has fallen since that date and the weather since has been unusually mild. At the present writing the snow in the mountains is hardly up to average and the farmers' hopes for an increased water supply next year will probably be shattered unless we should have some snow storms within the next few weeks.

District 4 - Intermountain District (Continued)

R. R. Irland and Homer Andrea, members of the Mountain City Livestock Association called at this office on February 12 to go over the qualifications of new applicants for the Mountain City and Merritt Creek divisions of this Forest and with the result that Mr. H. R. Irland disapproved his mother's application as a new applicant on this Forest on account of the fact that it was shown that she did not reside the entire year on her ranch property used as a basis for securing her permit. On the Mountain City division in past years, several permittees have had temporary permits and this year it has become advisable to dispense with temporary permits in order that we will not be overstocked on some divisions of the Humboldt Forest while others have surplus range.

Snow conditions have been ideal at McCall this winter for logging and sleigh hauling, about two feet being on the ground, and packed pretty solid. The Hoff & Brown mill here think they can contract their entire output during 1920 at between $30 and $40 mill run. They have applied to buy the white fir off a forty-acre tract of Forest Service land adjoining their cutting, and claim they can run it in with the regular cut of other species at this high price.

Supervisor J. C. Roak of the Kaibab Forest reports that in making up his allotment estimates for the Fiscal Year 1921, he was very much surprised to learn that slightly over $400 has been spent in shoeing the team of work horses on the Kaibab. The local blacksmith takes great pride in this situation and always points to the condition of the feet of the Forest Service horses to prove to some of the old "cronies" who hang around his shop that a horse's feet will stay in good shape even if continuously shod. The money spent on shoes for these horses, in Supervisor Roak's opinion, speaks volumes for the amount of work they have done, and he confidently asserts that no other team owned by the Forest Service has done an equal amount. He states that these horses are on the go the year round. In further comment, Supervisor Roak says, "We of course can not lay claim to having had these horses as long as some recently written up in the Weekly Bulletin, but we do claim that they have done more work and that the Forest Service owns no better animals to pull and work unless they are bigger horses. One of the team is getting rather stiff but so long as I am here, he will never be sold, as it would be almost criminal to dispose of a horse that has given as much service as this one. Should an 858 covering his demise come in at some time, too much inquiring as to how it occurred is not desired."

On August 30, Ranger Earl Templeton of the Humboldt Forest submitted a trespass report against Mr. C. E. Drown of Lee, Nevada, in which $67.00 actual damages and $100 punitive damages was claimed for settlement against the trespasser. Mr. Drown and his son made several calls at the Supervisor's office endeavoring to have the claim for $100 punitive damages waived, but since the Ranger's report showed quite conclusively that a willful trespass had been committed, the Supervisor's office stood its ground and requested the District Forester to make demand for the actual and punitive damages. It was shown that Mr. Drown had placed stock in excess of his permit on the Forest and that later he actually drove an additional 33 head through a gate in the fence along the Forest boundary at the point of trespass. It was on this ground that punitive damages were assessed. Supervisor Favre of the Humboldt feels certain that Ranger Templeton has driven several nails in old "Distasteful Trespasses'" coffin by discovering this trespass and securing the substantiating evidence which made settlement on his recommendation possible.

District 5 - California District

The East Side does not, as a rule, proceed with much noise. It is, on the whole, quite retiring, even unassuming. It does not believe in blowing its own horn, even when it has something to blow about.

Listen to the tale of the Mono as revealed by figures resurrected from the morgue.

District 5 - California District (Continued)

In 1911 its revenue was $8,930, its expenses $20,115. In 1919 its revenue was $25,830, its expenses $11,600. Income is now some three times that of 1911. Expenses one-half those of 1911. It stands higher in receipts for grazing (S & G) and grazing trespass; fourteenth in water power; 9th in Special Use and 5th in timber sales. It is eighth from the bottom, insofar as revenue is concerned, on the District 1919 list.

Timber on the East Side? For the year ending June 30, 1918 the Mono sold more timber than the California, Cleveland, Monterey, Santa Barbara and Trinity Forests combined.

Self supporting? Yes, ever since 1915 and now it is more than doubly so.

Such statements do not, of course, tell the full tale, but they do indicate steady, persistent effort accompanied by good, healthy progress.

The Mono and the whole East Side is to be congratulated.

Surface Fire on Rate of Growth.

In 1915 Douglas K. Noyes presented data to show that following a rather light surface fire in a stand of mixed conifers the current diameter increment falls off considerably, and that this decrease is apparently connected with the killing of part of the lower crowns of the trees by the fire. The data, though rather scanty, are conclusive as far as they go.

Since then additional data have been secured which have developed the following more important points:

1. Fires which injure the crowns of trees, but do not result in the death of trees, cause loss of growth amounting in the area examined to 33% of diameter increment.

2. Different species vary in their susceptibility to heat injury to the crown, the species ranking Yellow Pine and Sugar Pine in one group, with greatest resistance, and Douglas Fir and Cedar in one group with least resistance.

3. In response to a given degree of injury as reflected in rate of growth, the species rank, beginning with one showing the least response, Yellow Pine, Cedar, Douglas Fir and Sugar Pine.

4. Averaging all species together the reduction in rate of growth varies directly as the proportion of crown killed.

California Pine to the Fore.

A member of the National Lumber Manufacturers Association believes that the prospects are good for doubling the present cut of nearly 800 million feet of pine in California within the next 5 years. Installation of large new mills in Calaveras, Amador, Modoc and Madera Counties within a comparatively short time, he says, seems practically certain.

Besides these new installations there are rather definite prospects for additional operations on account of the movement of the lumber industry to the Pacific Coast. The Modoc, Stanislaus, California, Tahoe and Sierra Forests are apparently to be the scenes of new activities in stumpage and each new activity will involve applications for National Forest timber.

Timber survey work has already covered Government holdings adjacent to these expected new developments.

Mt. Shasta in Action?

Has Mount Shasta, jealous of the wide publicity Mount Lassen has obtained, determined to foresake its silence of centuries and become an active volcano?

Or was the phenomenon reported recently simply a snow flurry with no relation to any internal difficulties of the hoary sentinel?

As the result of a peculiar phenomenon recently a large portion of the southeastern slope of Mt. Shasta has an appearance similar to that of Mt. Lassen following a slight eruption immediately after a heavy snow.

About two-thirds of the way up the mountain, just above timber line, there is a deep canyon, almost inaccessible marking the headwaters of Mud Creek. The water of this creek constantly carries a very fine ash, or sand, sufficient to discolor the water of the McCloud River for a distance of several miles below the mouth of the creek.

District 5 - California District (Continued)

Mount Shasta in Action? (Continued)

The usual explanation is that there are series of mud springs, of a volcanic nature, flowing into the headwaters of the creek. Some persons, however, contend the mountain at that point is simply a vast slide of loose rock and ash which, glacier-like, keeps feeding into the stream. In any event, this portion of the mountain is the first to show bare after a snow.

Late one Saturday afternoon, at about the same time that a heavy windstorm visited in McCloud, what first appeared to be a gray cloud was noticed coming from the canyon. There were no other clouds visible at any other point on the mountain, nor was any snow blowing from any of the ridges, and for that reason the explanation of a local storm, or of blown snow, did not furnish a reason for the cloud. A prolonged observance of the spot with high power field glasses resulted in the discovery that the cloud was augmented at intervals by a decided spurt of a darker material, which was gradually disseminated and blown over the eastern side of the mountain. This was still occurring, when darkness made further observation impossible. Sunday and Monday there was no indication of a recurrence of the event.

There are only two explantions which seem to be applicable. One is that there was a local windstorm in the canyon, equaling in size and strength tornadoes such as are seen in the middle West. The other explanation is that a disturbance of some sort resulted in a geyser-like upheavel, which threw out dust and ash similar to that discharged by Mt. Lassen. Whatever the cause, a large area of the snow lying in the immediate vicinity of the spot is now discolored, while the remainder of the mountain retains its dazzling white covering.

District 6 - North Pacific District

Reports from all sections of the mountainous localities indicate that there is practically no snow. For the first time in several years at this season there is no snow at the Beaver Ranger Station on the Mitchell side of the summit, and Ranger Blake reports that work on the Wheeler County section of the Prineville-Mitchell road is progressing nicely and that a considerable strip of the right-of-way has already been cleared. There is only a small crew working at the present time, but as weather conditions become more favorable the contractors will add to the crew and push the work as rapidly as it is consistently possible.

Post card sized photographs mounted for insertion in the regular Forest Service field note book are ready for distribution to the Supervisors from the District Office of Grazing. Tall larkspur, Death Camas, Water Hemlock and Monks Hood are the species illustrated, the latter being included on account of its close resemblance to tall larkspur.

The object of the photographs is to provide the field men with something that can be used as a ready reference when considering the species in question. They will also help them to recognize more easily the principal poisonous plants. Brief descriptions of the poisoning effects of each species will be placed on the backs of the mounted pictures.

Major Albert Smith, of the Air Service, spent a night in Portland during his flying trip from Riverside, southern California, to Puget Sound, in the interest of the fire patrol to be maintained on Northwestern forests. Major Smith is quoted as having said while here that the lives of the forest patrolmen are to be safeguarded by parachutes; that part of the regular equipment of each DH-9 plane is to be such a parachute, which ordinarily will be closed and strapped to the patrolman's back, making a cushion for him to rest against. But should the engine fail he must jump from the plane, and when clear of it pull the cord extending over his right shoulder. This will raise the parachute. The mountainous country over which the forest planes must travel and the absence of areas where forced landings would be practicable make these life-savers necessary. Major Smith had engine trouble on his arrival in Portland from San Francisco, which happened to occur directly over Broomfield aviation field.

Robert Harrison Weitknecht announces the change of his name by law to Robert Harrison Weidman, February 17, 1920.

District 6 - North Pacific District (Continued)

The supervisors' meeting at Baker, Oregon, February 20 to 25 inclusive was one of the best ever held in this District. Everyone entered into the discussions with enthusiasm, and an earnest effort was made to bring out facts and figures indicating existing conditions and suggesting where improvements should be made. The various supervisors described their 1919 fire seasons and expressed views based on their own experiences, the discussion bringing out in clear relief weak points in our organization and plans. The value of the cooperation of grazing permittees in preventing and suppressing fires was emphasized. On the Wallowa especially the stockmen assume large responsibility for prevention and suppression of fires on ranges used by them. The good fire record of the Wallowa for last summer is partly the result of the cooperation given by the stockmen's associations. It was noted also that other Forests with progressive livestock associations in control of the range came through the 1919 season with fewer and less destructive fires than occurred where the stockmen were disorganized. Cooperation given by stockmen was believed of sufficient value largely to offset the difference between grazing fees charged on Forest lands and on other lands of comparable value. Esprit de corps of the Service, road construction under the 10% provision, and wider knowledge of Forest conditions to be obtained by supervisors through inter-Forest visits, were questions discussed. The Commercial Club of Baker tendered the convention a luncheon, at which sentiments expressed plainly indicated that Baker is appreciative of the Forest Service and what it is trying to do. A luncheon also was given by the King Dehydrated Product Company.

"Grazing" is seeking to influence stock owners against turning stock on the range any earlier than absolutely necessary. The necessity of preventing the decrease in annual forage that would result from too early grazing has been explained by Mr. Peterson, who states that the hay supply of stockmen frequently runs short early in spring, with consequent early grazing of the range. The stockmen are beginning to realize the advantage to themselves of allowing the forage a two-weeks period of undisturbed growth, after which limited grazing will not affect its future vitality. He has called attention to the decrease in forage production, due to too early grazing, in certain places; explaining also that too early grazing eliminates plants of forage value, making room for worthless species to spread.

Mr. Cleator believes that Ranger Taylor has found the hitherto unknown source of Lost Creek, Cascade Forest, western Oregon, during his recent inspection trip in the region. He says it is in a lake at the upper reaches of White Branch. Lost Creek runs underground for about seven miles and for a part of the distance almost underneath White Branch.

Our Douglas fir is now being shipped to Tunis, north Africa, and has already been marketed at Alexandria, Egypt. Belief is expressed that a large and permanent trade in it is to be built up with north Africa.

District 7 - Eastern District

Three head of buffalo, a 3-year old bull, a 2-year old and yearling heifer, were shipped from the Wichita National Forest and Game Preserve to the Platte National Park at Sulphur, Oklahoma, on February 16. The transfer was made in response to a request by the National Park Service for assistance in re-establishing a herd of buffalo at the National Park. All expenses of crating and shipping the animals was borne by the citizens of Sulphur. This makes the ninth Government herd to be established, and is in line with the wishes of the Biological Survey, which is anxious to have at least 10 herds of these animals.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

March 15, 1920.

Col. W. B. Greeley to Succeed Col. Graves

Secretary Meredith announced on March 14 that he has selected Col. W.B. Greeley to succeed Col. Graves as Forester on the latter's retirement on May 1. In making known his selection Secretary Meredith said:

"I consider that the Department is fortunate in having available a man so well qualified to fill an exceptionally difficult and responsible position, and I am convinced that the public interests in forestry will be in good hands with Col. Greeley at the head of the Forest Service."

Col. Greeley, to use a time honored phrase, "needs no introduction" to members of the Service. All of us know his ability. As Supervisor of the Sequoia National Forest, as District Forester of District 1, as Assistant Forester in charge of Silviculture, and as Lieutenant Colonel in command of the Forestry section of the American Expeditionary Forces, he has a record for doing big things. No man knows the needs of the Service better than he and no one is better qualified to meet them.

It is a source of gratification to the members of the Forest Service that Col. Greeley's appointment recognizes the fundamental principle that the head of the Forest Service must be a technical Forester. It is gratifying also that the Service has in its own ranks a man so well fitted for the place and that it was unnecessary to go outside to make the appointment.

Pulp Output Reduced by Long Storage

How large a loss may be caused by decay in pulpwood through storage was learned in recent observations conducted by the Forest Products Laboratory at a sulphate pulp mill.

Pulpwood which yielded over 3½ tons per digester when used green, after a year's storage yielded only 3 tons. Some which had been stored for from 2 to 3 years yielded only 2½ tons per digester. These losses in production, amounting in the latter case to over 25 per cent, occurred without any compensating reduction in operating expenses. Hence the monetary loss was fully equal to what the lost product would have sold for f.o.b. mill.

Such losses can be largely reduced by so operating the wood yard that the wood is used as nearly in rotation as possible, without allowing any to remain in storage as long as one year.

EDUCATING THE STOCKMEN

With a view toward the perpetuation of National Forest grazing resources it is essential that better methods of securing utilization of them be adopted by the stockmen.

Grazing studies by Forest Officers and their experience in range management have provided some very interesting data that would greatly aid in convincing the majority of all permittees as to the need for inaugurating improved practices if these data were made public in a form that would appeal to them.

The study areas are sufficient in number and are so widely separated throughout the many different Forests that figures obtained from them would be applicable to the average grazing unit upon any National Forest with possibly slight modifications to meet local conditions.

The major portion of the publicity along this line has, I fear, been confined chiefly to Service employees and through them a part of the knowledge that has been gained has been made known to the stockmen. The stock grower is the person who will ultimately be benefited on account of such studies in the way of increased carrying capacity of ranges, betterment in the condition of stock turned off the range each year, increased calf crops, and reduction in losses of livestock through improved methods of practice in range management. They should therefore be furnished with all the reliable facts available.

Educating the Stockmen (Continued)

A campaign to secure the adoption of improved range management is imperative in order that the National Forest ranges will be improved in the productivity of desirable forage plants. With this in view it would be well to supplement the efforts of the field officer in this respect by a wide distribution of all available data in pamphlet form among the Forest users, in order that we may make a decided advancement along this line in the immediate future.

The successful continuation of the livestock industry in localities depending chiefly upon National Forest range for summer pasture is directly dependent upon this phase of administration, and controls in a measure the importance and wealth of many communities. The sooner each individual permittee can be brought to consider a grazing privilege as an integral part of his ranch holdings warranting consideration as such, the sooner our grazing industry will become stabilized and our National Forests be made to contribute their highest use to the Nation. It is not unlikely that the cost of accomplishing such publicity would be well repaid through increased revenue in grazing receipts due to increased carrying capacity resulting from the adoption of improved methods.

The attitude of the stock-grower in most instances is favorable to practicing improved methods up to a point where it becomes necessary to construct needed range improvements requiring a direct cash outlay. In this regard it is apparently difficult to justify the expenditure since the great majority of the stockmen were accustomed to the use of large open range areas of past years in the prairie country and do not readily admit the need for such costly improvement. Consequently an authentic statement of what has been accomplished in other places would have a very beneficial effect upon the opinion of local stock-growers in the various communities.

Establishment of a system of deferred and rotation grazing is the essential thing in order to prevent depreciation and a series of fences constructed, with this purpose in view, over almost all National Forest ranges is required. Time will be required in order to arrange this desired system effectually but constant effort, employing every ingenious factor at the command of the Forest Service is justifiable in order to accomplish this end.

L. F. JEFFERSON
Forest Ranger, Jefferson
National Forest.

It is probable that the opinion expressed by Ranger Jefferson is held by other Forest officers. Unquestionably there is a big field for our educational efforts and it is probable that our present methods can be elaborated and improved. Bulletin 790 - "Range Management on the National Foresfs" - was written to supply just the sort of information that Ranger Jefferson says is needed. The bulletin gives the methods of management which are recommended by the Service in connection with its grazing work and the results secured under each. The information itself is good, but presumably the bulletin has not been widely distributed among the permittees on Ranger Jefferson's district. Perhaps the same thing holds good for other Forests. Perhaps we need to take greater care in getting bulletins into the hands of the proper people. How about it?

Difficulties in Caring for Association Bulls

Among the many plans which the Branch of Grazing has worked up for cooperation of the stockmen looking to an improvement of conditions on the ranges has been the one of improving the breed of cattle through the use of purebred or registered bulls. One of the most satisfactory methods of handling this proposition has been through the approval by the District Forester of special rules, one of which authorizes the Advisory Board of the Association to appoint a committee to purchase in the name of the association the number of bulls needed by the members. This purchase was accomplished through a pro rata assessment of the members of the association based on the number of stock grazed by each. The committee then proceeded to purchase the bulls which were branded with the association brand, turned loose on the range by the committee at the agreed time, and when taken from the range at the close of the season were looked after and cared for during the winter by the committee, the entire association being assessed for this charge. If a bull died the loss was borne by the association and the animal was replaced from the funds of the association.

Difficulties in Caring for Association Bulls (Continued)

In this manner a more uniform type of animals was possible and the results insofar as securing a higher grade of stock is concerned have been unusually satisfactory.

A few inherent weaknesses, however, have developed in this plan which have caused some trouble in carrying it out. These, however, are weaknesses due not so much to the plan itself as to the carrying out of the plan. Recently in a letter to a fellow supervisor, Supervisor Harris of the Wallowa National Forest sums up these difficulties in the following statements:

1. The bulls did not do as well as they should. If they put all the association bulls together and fed them during the winter, the stronger ones would fight the weaker ones away from the feed. If the association turned over to each member his share of the bulls to winter, some of the permittees took good care of them, while others would not. Then there was some discussion about feeding them. One permittee might be in better position to winter the bulls well and cheaply than another.

2. When the association owned all the bulls they were expected to furnish bulls for new owners coming on to the Forest. If they had to go out and buy the bulls in the spring, they could not buy to the best advantage, nor get the best stock.

3. The association had to reappraise the bulls every spring, in order that new owners coming in could be charged an equitable pro rata amount for his share. This could only be done with difficulty, for both the bulls and men are scattered. The system of keeping exact accounts of each member's interest was difficult, and they never did get it down to a business basis.

4. The association was not so thoroughly organized as it should be to hold in ownership such a big amount of value as was represented in the bulls and their care. They were not incorporated, and the secretary was not under sufficient bond. That is, the affairs were carried on in too slip-shod a manner.

It is evident that there are two points in this matter which must be kept in view in working up this sort of an agreement for handling bulls on the National Forests. (1) Will the members of the association stand together on it and abide by the requirements of the special rules with cheerfulness and thorough cooperation; (2) have they a man in their association capable of doing the work who will attend to it regularly, keep the books in a reasonably satisfactory manner, and otherwise handle the business as it should be?

Probably some other supervisors than Mr. Harris have already had their troubles in this matter similar to those he has met, and a discussion of the methods which they took to remedy the situation or any suggestions might be well worth printing in the Bulletin.

WILL C. BARNES.

The Passing of White Pine

Members of the Forest Service frequently refer to the cutting out of the white pine timber in the Lake States without specifically emphasizing the extent or seriousness of the situation. It requires figures ofttimes to bring out pointedly the true situation. Such figures - and rather startling figures they were too, based upon the totals of the annual inventories for 23 years, or from 1898-1920, were presented at the recent annual meeting of the Northern Pine Manufacturers Association. Back on January 1, 1898, the stock on hand at the mills in the Lake States amounted to 2,143,283,743 feet. Two billion feet of lumber is some stock! Almost without exception each January inventory since then has shown decreased stocks. On January 1, 1920, inventories, which are the smallest recorded, aggregated 410,487,100 feet - or but 19 per cent of what they were 23 years ago, a decline of approximately 1$\frac{3}{4}$ billion feet. Visualizing the lessened output of northern pine from another angle, statistics show a production in the Lake States for 1900 in round numbers of 5$\frac{3}{4}$ billion feet, or 17 per cent of the country's aggregate output of 34$\frac{3}{4}$ billion feet of all woods. In 1918 the Lake States cut 1 billion feet of northern pine, or 3 per cent of a total cut of 32 billion feet. White pine, the species that has been aptly termed the "king of building woods," is in the passing. Yellow pine has joined the procession. How soon will we become reminiscent when we talk about Douglas fir?

F. H. SMITH.

Articles prepared for publication during the month of February, 1920.

Title	Author	Publication
An Analogistic Explanation of "Casehardening" of the Relation of "Set" and Stresses which Occur in Drying Wood	H. D. Tiemann	Journal of the Franklin Institute.
Less and Inferior or More and Better Timber, Which?	R. Y. Stuart	Lumber World Review
Reforestation and the Veneer Industry	C. R. Tillotson	Veneers.
What Light Creosote Oils Have Done in Wood Preservation	Ernest Bateman	To be presented at the February Meeting of the Wood Preservers' Association, and published in reprints, from proceedings.
Possibilities for the Practice of Forestry in the Douglas fir Region	Thornton T. Munger	American Forestry.
The Poor Man's Playgrounds	John L. Cobbs, Jr.	Magazine of general circulation.
California Foresfs and Forestry	T. D. Woodbury	American Forestry.
Free Camping	Arthur H. Carhart	Collier's or some similar magazine.
A Policy of National Play Grounds	Arthur H. Carhart	Landscape Architecture.
Paper, Pulp and Board Mills of the World	H. E. Surface W. B. Barrows	By News Print Service Bureau.
The Construction of Logging Improvements on the National Forests with Federal Funds.	C. L. Billings	Journal of Forestry.
Silver Permanganate as a Remover of Carbon Monoxide from the Air	Ernest Bateman	Journal of the American Chemical Society.
Profit Margin in Logging Operations	J. W. Girard	Journal of Forestry.
The Structure of Woods Used in Making Pulp and Paper	Miss Eloise Gerry	Paper.
The Equipment and Operation of an Experimental Laboratory	V. P. Edwards, Otto Kress Sidney D. Wells	Paper Trade Journals.
The National Forest and the Town Pump	L. C. Everard	Collier's.
Treating Fence Posts on Farms	Wilbur R. Mattoon	By the Louisiana Agricultural and Mechanical College.

Title	Author	Publication
The Thermal Decomposition of Turpentine with Particular Reference to the Production of Toluene and Isoprene	S. A. Mahood	Chemical and Metallurgical Engineering.
Decay in Treated Timber	G. M. Hunt	Engineering News-Record.
The Survey of Forest Lands in the Southern Appalachians	Rudolph Dieffenbach	American Forestry.
Forest Fire Patrol by Airplane	R. F. Hammatt	Scientific American.
Lumber Manufacture in the Douglas Fir Region	H. B. Oakleaf	Lumber.

Legislation

A resolution urging the passage of a bill establishing a forest experiment station in the White Mountain National Forest has been passed by both houses of the Massachusetts Legislature and forwarded to Congress.

New Zealand Lumber Market

Owing to the labor shortage and the building boom in New Zealand and Australia, New Zealand lumber mills are unable to meet the demand, so that it is expected that New Zealand's importations of American oak and Douglas fir will break all records for last year, as these lumbers are in great demand for the interior finishing of homes. There is also a marked shortage of Oregon pine. There seems to be plenty of money for loans for building homes, which will enable the vast number of homes already planned to be constructed. In fact, the new housing bill passed by Parliament during October provided for substantial loans to workers on a 5 per cent basis with one-half per cent rebate for prompt payment, for 30 years in the case of wooden houses and 36½ years for those of permanent materials. The New Zealand Government recently added 1,800,000 acres of privincial forest to the forest reserve, making a total of 10,500,000 acres, but of this the total area of milling value is only 1,371,000 acres.

Quebec to Conserve Pulpwood

The possibility of further restrictions upon the export of pulpwood is indicated in an address by Sir Lomer Gouin, prime minister of the Province of Quebec to the Canadian Pulp and Paper Association at its annual banquet held in Montreal recently.

Emphasis was laid on the necessity of conserving and restocking the provincial timber lands. At present there are 45,000,000 acres under license with a reserve of 75,000,000 acres of virgin forest. The Premier claimed that the Province of Quebec had more than one-half of the entire pulpwood supply of Canada and the largest unit of forest wealth in the world. It is the Government's purpose to make an inventory of these crown lands. He emphasized the importance of keeping the raw material for the use of the Canadian pulp and paper plants and indicated that this policy would not be relaxed, but intimated that the time might come when it would be necessary to limit the cut of the Quebec forests for the exclusive use of Quebec mills.

Washington Notes

H. I. Loving, District Fiscal Agent of District 6, who has been in Washington for the past two weeks, has returned to Portland.

Julius A. Larsen, in charge of the Priest River Experiment Station, has arrived in Washington for a month's detail in the office of Research.

J. H. Kerrick of Accounts left on March 8 for Hot Springs, Arkansas, where he will inspect the records of the Arkansas Forest.

Washington Notes (Continued)

James T. Jardine, Inspector of Grazing, in charge of grazing studies, has submitted his resignation from the Forest Service effective approximately June 1. Mr. Jardine has been in the Forest Service since 1907, when he was selected to take charge of sheep studies in northeastern Oregon. His selection was made, as he puts it, primarily because he was an "educated sheep herder." As such he made good his first bid for fame. In 1910 he was placed in charge of grazing investigations and in 1915 took over the investigations on the public domain. He originated and developed the present methods of range reconnaissance in use by the Forest Service and has been largely responsible for the introduction of progressive methods of range management. He is known not only as a grazing expert, but in the early days on the Wallowa Forest he was known as the champion post hole digger of the region. Everybody in the Service knows and likes Jimmy Jardine, and he will be sorely missed. Here's luck!

Professors H. H. Chapman and R. C. Bryant of the Yale Forest School stopped in Washington one day last week on their way to Urania, La. where the senior class of the school will make a working plan for a large tract of yellow pine.

District 1 - Northern District

Game Law Violators: According to reports recently compiled, the Jefferson leads all other Forests in the District in the number of arrests and convictions of game law violators. Probably poaching in the vicinity of the Jefferson will in time become more and more unpopular as an outdoor sport as the good work of "hanging it" on the offenders goes on.

Let's have a little publicity on game law violations, especially those followed by convictions. If the next Forest officer who upholds the long arm of the law in such a matter will write an account of apprehending the criminal and bringing him to time, giving a resume of the whole proceeding, it will make interesting reading for every one.

Game Census and the Deer: The following figures have just been compiled from the annual grazing report.

Deer	Elk	Moose	Mt. Sheep	Mt. Goats	Others
55098	14919	1969	2856	4058	175 antelope 30 caribou

The detailed figures show that the ten Forests east, or partially east, of the continental divide have an average of only 782 deer, while the seven Forests west of the divide have an average of 4800. The question naturally arises as to the reason for nearly five times as many deer per Forest in the west as in the east. One reason may be that there are fewer people in and adjacent to the western Forest, and consequently fewer deer killed yearly. This is undoubtedly one of the real reasons for the difference. Should we, however, accept the decreasing number of deer in the east as inevitable without studying the matter closely and attempting to remedy the situation, if possible?

In many ways the deer is one of the most desirable big game animals in the District. Deer do not congregate in great herds during the winter and drift down in the settled areas, as do the elk, which gives rise to an acute game problem. They range in small bands, taking care of themselves in a very creditable manner when given half a chance and at the same time furnish most desirable hunting for a large number of people in almost every Forest community during the open season. In many places adjacent to eastern Montana Forests, one often hears expressions of regret that deer are no longer plentiful, and it is feared that in a few years they will be practically exterminated.

Some observant Forest officers and other citizens, who are keenly interested in the perpetuation of the game supply, believe that the present open season for deer, October 1 to December 1, is too long, especially for that part of the State lying east of the continental divide. Let us have some opinions from rangers and field men on this point, hoping for additional light on the game preservation subject.

District 1 - Northern District (Continued)

Two more contributions on the subject of the effect of grazing on fires are received. Ranger J. L. Adams of the Cabinet writes:

"One fire in this District occurred on a yellow pine site which had been grazed during the past season. The stand was mature with a fair stand of reproduction scattered throughout, excepting for two small areas which had been previously burned. These were covered with a heavy growth of twenty-five year old reproduction.

The stand as a whole consisted of approximately 75% Yellow Pine and 2 Western Larch, Douglas Fir and Lodge pole.

During the period of the fire excessive high winds prevailed, which caused the fire to spread over a large area. At intervals when the wind subsided the fire ceased to run and existed only in rotten logs and snags. The fire completely died out upon reaching a gulch on the area which had been used for a driveway and bedding ground.

A very small portion of the reproduction throughout the mature timber was killed and it is believed the fire would not have spread or that any material damage would have resulted under normal weather conditions and that grazing was responsible for the comparatively small amount of damage done.

From these observations of actual results, I am firmly convinced that grazing is a great benefit in the reduction of fire danger on areas of this type."

Ranger B. F. Saint of the Cabinet also submits the following:

"During the summer of 1916 I had the good fortune to be in close touch with quite a large bunch of sheep grazing on the Trout Creek Ranger District and I feel quite sure that a fire would have had pretty hard sledding to make any headway over the greater portion of the grazed area and since that time I have been fully convinced that extensive grazing would work wonders on our western Forests and if properly handled it should lower our protection costs at least one-third in a few years.

It isn't the grazing alone either, the driveways and trails if located with protection in view will serve as excellent fire breaks and it is felt that this may be done with very little additional cost and inconvenience to the grazing business."

District 2 - Rocky Mountain District

The Forest Service, cooperating with the Pueblo Chamber of Commerce, put on an outdoor life exhibit on one day's notice, at the Denver Automotive Show, March 2 - 6, held in the stadium at the Denver stockyards. The display featured in miniature a scene from Colorado's new mountain playground, the San Isabel National Forest, which was visited in 1919 by 85,000 recreationists including 48,000 motorists. This Forest is being developed as a motoring, camping and picnic playground by the San Isabel Public Recreation Association of Pueblo cooperating with the Forest Service. Much favorable comment was heard on the Service display which was considered one of the best small exhibits at the Show. More than 13,500 people out of a total attendance of 65,000 at the Automotive show, stopped at the Forest Service exhibit and read the display signs.

On Tuesday evening, March 2, a meeting of sportsmen and others interested in game protection was held in Denver for the purpose of starting an organization to be known as the Colorado Fish and Game Protective Association. A committee of five was appointed to work up by-laws and to make a canvas of the local game protective associations of the State in view of encouraging the matter on a state-wide plan. This committee will meet within the next three weeks and present a plan to the sportsmen and others interested in the question. Assistant District Forester J. H. Hatton was named on this committee.

District 2 - Rocky Mountain District (Continued)

Grazing Inspector Douglas tells of a trespass case which would be hard to beat for promptness and effectiveness, although the necessity for quick action involved some slight irregularities. Mr. Douglas was in the office of the Supervisor of the Montezuma Forest last year when Ranger Rich Thomson called by long distance telephone from Dolores to report that a sheep owner, not a permittee, who had been grazing his sheep on private land within the Forest had trespassed on Forest land. He had discovered the trespass that day and learned that the trespasser was on his way to the railroad to ship the sheep out of the country. The ultimate destination of the trespasser could not be learned. Thomson had beat the trespasser to the railroad point, Dolores, and was anxious to get quick action in the Supervisor's office, knowing that if the trespasser, who was of the nomadic type, got out of the country the chances for settlement were slim. He gave the essential information on which the usual trespass report is based and was told by Supervisor Parker to hold himself in readiness for action.

The one train a day on which mail could be sent to the trespasser or to Ranger Thomson was due to arrive in an hour. Mr. Douglas dictated a letter addressed to the trespasser, which he signed as Acting District Forester, requesting payment of a given amount in settlement of the damages. Supervisor Parker, on finding that it was too late to get the letter into the mail, handed it to the engineer of the train, asking him to hand it to Ranger Thomson on arrival at Dolores. Ranger Thomson presented the letter to the trespasser in person, demanding that payment be forwarded to the depository in his presence. This was done and the case was closed on the ground.

Between 7 A.M. and 6 P.M. of the same day the trespass was discovered, the report made, the case reviewed, the request for settlement sent and received, the payment remitted and the case closed. In one way or another the regulations were complied with except that the case was not referred to the District Office. If the present regulations authorizing the Supervisor to settle small cases had been in effect at that time the action would have been regular, which, in a way, retroactively justifies the action taken.

District 3 - Southwestern District

Found! The badge of a prehistoric Forest Ranger! The discoverer is Ranger Fred Plomteaux of the Santa Fe, and Supervisor Andrews has sent it in for the District archaeological collection. The badge is a crude, heavy star, made of lead, about 3/8 inches thick and 1¾ inches in diameter. On the face of it and extending to the end of one of the points is the branch of a tree (genus and species indeterminate) in high relief. The clasp is a prehistoric safety-pin of apparently antique design.

Now the well-known California "light-burners" maintain that the Indians practiced forestry, especially light-burning. From this contention their opponents have coined the epithet "Piute forestry." Supervisor Andrews writes: "If anything more were needed to prove Stewart Edward White's theory of Piute forestry, this relic is conclusive."

It may well be that Ranger Plomteaux's discovery is nothing less than a Piute Ranger's badge, lost when that Ranger,-- perhaps several centuries ago,-- went out to light-burn his District, suddenly found himself surrounded by an unexpected holocaust, and beat a quick retreat. Whether he had to pay for the badge, the Piute historical records say not.

Deputy Supervisor Thompson of the Coronado, has received the following letter which conveys its message unequivocally:

"Dear Sir:

Mr.____ __________ was telling me that ______ said that i was agin
the Forest Reseirv that man is the begest Lier in this Country and I will spoil
all his Purty Face wen i see Him i had to kick Him out of my Place the other
Day for Lying about me i must say 1 thing about the Forest if it wasent for
the Forest Reseirv the Big Catel Men would hav driven me out of Bisenes i
hav Nothing but the Best Wishes for all Forest officers and apriceate the
Good it dun for the small Holder. Yours Truly."

District 3 - Southwestern District (Continued)

The price of sugar in Silver City is now quoted at 20¢ a pound and hair cuts have gone up to 65¢. Every time the Government reports that the peak of high prices has been reached there appears a still higher peak - at least in Silver City and vicinity.

From present indications, the Gila Forest is going to face a very serious fire season. Practically all the snow is off the mountains. The time to get ready for a bad season is now. The first fire of the season has just been reported from the Big Burros Division. Details are lacking.

The first fire of the season occurred in Sixteen Springs Canyon of the Mayhill District of the Lincoln Forest while Ranger Smith was down with the "flu. One of his permittees took charge, broke into a fire tool box, and together with other permittees succeeded in putting out the fire.

District 4 - Intermountain District

The people at Enterprise, Utah, are jubilant over the prospects for a bumper crop and excellent range for their stock during the coming season, according to word received from Supervisor Wm. M. Mace at Cedar City. The Enterprise reservoir from which their water supply is received is reported to contain more water than for the past four years. During the past two seasons the supply in the reservoir has been so low that the people have received practically no benefit from it and the crops have been very short in consequence. It is reported that the reservoir filled fifteen feet during the last twenty-four hour period of the recent rain storm. Since there is still plenty of snow in the mountains it is probable that the reservoir will be filled to the level of the spill-way, which it has been known to do only once since it was constructed.

Supervisor Wm. M. Mace of the Dixie-Sevier has just received an inform application from a responsible citizen of Cedar City for a special use permit to construct a hotel at the head of Cedar Canyon and overlooking the Cedar Breaks in order to provide accommodations for tourists who visit that section. The applicant proposes to construct a log building of about twenty rooms and wishes to begin the construction work as soon as weather conditions will allow him to get on the ground. This is the first application of this kind to be received on the Dixie, but others are expected within the next few years and also applications for summer home sites with the opening up of Duck Lake recreation ground.

Deputy Supervisor E. B. Spencer of the Cache National Forest has returned from a short field trip to Paris, Soda Springs, and Grace, Idaho. He reports an excellent stock association meeting at Paris at which nearly 100 permittees were in attendance. At this meeting a unanimous vote was registered to assess each permittee 15¢ per head of permitted cattle and horses for the purpo of joining with the Paris Commercial Club in purchasing a Ranger Station site to be deeded to the Government. A meeting of the Village Board of Grace and representatives of the North Cache Stockmen's Association failed in its purpose of attempting to arrive at some satisfactory solution of the problem connected with the proper protection of the municipal water supply of Grace. It will therefore be necessary to prohibit all grazing on the watershed.

The continued cold weather on the Idaho Forest this winter froze Paye Lake so hard that it bulged in the middle and expanded in all directions toward the shore. Piling driven in the Lake along shore was pushed over to an angle of 45° and in many places pulled 18" out of the ground. The Hoff & Brown sawmill a log chute extending from the mill into the Lake. The shoreward movement of th ice was so great that pressure on this log chute moved the mill out of plumb at least six inches. Blocks 18" long were cut out of this log chute to prevent further damage, and afterward this space closed up to eight inches. Wharves along shore were broken.

A bridge is being built across the Payette River about one and one-half miles south of McCall on the Idaho Forest. This is primarily for the purpose of crossing sheep to and from the stockyards to avoid trailing along the lake shore, and is directly across from the stockyards. The County of Valley is contributing $300, and a recent meeting of the Idaho National Forest Woolgrowers Association voted to give $1000 to be paid through the Forest office at McCall. The Boise-Payette Lumber Company contributes timber. Construction work is being done by a committee of Payette Lake citizens. The Forest Service is not giving any monetary assistance but is free with the advice of its officers. The bridge is being constructed of piling driven in the river 20 ft. apart, without trusses of any kind. When completed it will open a more direct route to the National Forest from the stockyards.

The elk on the Teton on the whole are doing nicely. The loss so far has been very light and confined to orphan calves, cripples, and extremely old animals. Information from the Leek ranch, where the State of Wyoming's carload of cottonseed cake is being fed out to the elk, is to the effect that the experiment is a decided success. Elk of all ages eat it with relish, and after once having tasted it they eat it greedily. Supervisor McCain has suggested that perhaps this feed can be made the means of saving many orphan calves. These calves do not seem to thrive on hay, and the substitution for or mixing of cottonseed cake with the hay may possibly make a ration upon which they would thrive.

The mayors of several towns in Southern Idaho have signified their intention of sending committees to Hailey, Idaho, the headquarters of the Sawtooth Forest, for the purpose of selecting community recreation center sites. To help develop this kind of use on his Forest, the Supervisor is endeavoring to secure some of the Y. M. C. A. portable huts which will serve very well pending the construction of community club-houses.

The Hyndman Peak Club came into existence during February. Hyndman Peak is the highest mountain in Idaho, and may be climbed without a great deal of difficulty. This Peak is located on the Sawtooth National Forest. A register will be maintained on the peak, and membership cards will be issued to those who climb peak and register their names there. These cards will bear a half-tone of Hyndman Peak, with information relative to its elevation, etc. An object finder will be installed on the peak.

At the annual meeting of the West Palisade Stockgrowers Association, held in Rexburg, Idaho, on February 29, it was decided to offer a reward of $25 for each wolf killed on the Moody Creek range of the Targhee National Forest.

The association agreed unanimously to postpone the opening of their grazing season from May 1 to June 1.

New officers were elected and the members of the Advisory Board have decided to accompany the rangers when counting on feedlots in order to assist in getting checks on bulls, breeding cattle, etc. Each member of the board will accompany the ranger while in his immediate vicinity and territory.

The stockmen of Snake and Spring Valleys on the Nevada Forest, met at Baker, Nevada, February 14, and organized the Mt. Wheeler Livestock Association. This association is organized to handle matters of general interest to farmers and stockraisers in addition to cooperating with the Forest Service in handling grazing matters. One point of interest that was brought out at this meeting was watershed protection which seems to be appreciated as much by nonusers of that Forest as by Forest users. This point was very interesting, and especially when some of the nonpermittees expressed themselves as believing they should be entitled to a voice in establishing the number of stock to be allowed on the watersheds, inasmuch as the condition of the Forest cover was recognized as affecting the stream flow. In view of this new movement of the nonpermittees it is wondered whether additional pressure in effecting better handling of stock on the range, or more criticism on account of the condition that may exist by close utilization of the range, will be the result.

The success of stock associations on the Nevada in the past has been badly interfered with because of the scattered condition of the permittees and the apparent lack of a common interest, and it is believed that in this organization the lines have so been drawn that this feature has been overcome and some very good support should be received from the present organization. The Advisory Board has been recognized by the District Forester and it is planned to cooperate with this board in making all necessary adjustments on allotments, etc., during the coming season.

The following letter was received by the Supervisor of the Wasatch Forest from Professor Fred Buss, of the Brigham Young University:

> "* * * I feel that the National Forest Service is making a splendid contribution to society in its endeavor to popularize the forests as playgrounds and in furnishing conveniences that the public may enjoy the beauties of the Great Out of Doors. * * *
>
> "Again may I add that I am sure the Timpanogos Nature Club of which I am a member, appreciates whatever the Service has done and is doing to make the annual hikes to Timpanogos more comfortable and attractive."

The teamster that Ranger Green arrested in January for refusing to register before driving up Cottonwood Canyon on the Wasatch National Forest, was found guilty by the City Attorney of Salt Lake City and paid a fine of $10.

Owing to the light snow this winter, which has made it possible for fur-bearing and predatory animals to move over the mountains at will, there has been a great deal of trapping done. Not many reports are received of coyotes being caught but the skins are bringing as high as $32 each. Marten furs average about $35 while foxes have brought as high as $45 and $50. Muskrats bring $2, and weasels $2.50. On the Teton Forest two trappers on the head of the Yellowstone River, within the Forest, have taken to date 150 marten, 20 foxes, and 10 cross foxes. A conservative estimate of the value of this catch alone is more than $6000 and the best month (March) for trapping is still ahead of them.

Forest Ranger Frank Miller on the Payette has been working to secure the formation of a fish and game association for the Little Squaw Creek Valley country, and his efforts will probably bear fruit in the near future. The organization will be formed by residents of Sweet, Ola, and the adjacent country. The organizers have already asked the State Game Warden to furnish 200,000 trout fry next season for planting in the North Fork of the Payette River.

"Surely the millennium is coming!" says Supervisor Mains of the Payette. The basis for this assertion is the report of Ranger Miller to the effect that at a recent meeting of the Ola Grazing Association everyone seemed satisfied, and there were no quarrels or dissentions over range allotments and permits such as have characterized the meetings in years gone by.

Meetings of the Forest officers and Advisory Boards for the Gem County, Jerusalem Valley, and Ola Grazing Associations on the Payette Forest have been held during the past week for the purpose of approving applications for the coming season, and for the consideration of other grazing matters and plans. The meetings were all very harmonious and the Boards were anxious to cooperate with the Service in bettering range conditions, through improved methods of distribution of stock on the range, establishment of salt troughs, and locating the troughs on the range so as to secure better distribution of stock and utilization of forage. The Boards were also in favor of tagging their cattle, even though it became necessary for them to purchase the tags themselves.

The water users in the lower Payette Valley have during the past week formed a corporation and filed on 50,000 acre-feet of storage water in Payette Lake, their plan being to construct an 8-feet dam at the outlet of the Lake, near Lardo, and divert the water for irrigation of lands in Payette Valley, during the low water period. Shares of stock will be sold to the settlers desiring to use the water. It is estimated that the dam at Payette Lake will cost approximately $20,000.

District 5 - California District

Several years ago there was considerable agitation to eliminate a big portion of the Trinity National Forest lying in Western Trinity and Eastern Humboldt Counties. It was asserted then, and at times since, that there was much desirable homestead land "bottled up" within the Forest.

The following figures, compiled after a careful examination of a large area in the western part of the Trinity National Forest, show the real facts:

Within the area in question there were at the time of the examination 348 patented homestead entries. Of these but 98 (28%) were either occupied or were under some cultivation. 252, or 72% of the total number examined, had been abandoned, were unoccupied and no longer cultivated. And this, remember, after time, effort and cash had been spent in securing patent to the grounds.

It is true that Humboldt County contains some of the finest ranches and some of the best agricultural opportunities in the State. It is equally true that Humboldt, along with Trinity and many other mountain counties, contains much land that is not agricultural. Why not recognize this fact?

It should be remembered, too, that all lands inside the Trinity, as is the case with all other National Forests in California, have been carefully examined and classified. Such as is chiefly valuable for agricultural purposes has already been listed for homestead entry and may be filed upon at any time. Forest officers at Weaverville and at San Francisco have the descriptions of such few parcels as exist in the Trinity Forest, and are glad to give, besides the legal descriptions, facts concerning accessibility, soil, climate, and exposure, to anyone desiring to investigate.

Restoration to entry of the balance of the Trinity National Forest would not increase Humboldt's permanent agricultural area. It would mean that much of the lands would, as have many of the abandoned homesteads already mentioned, pass into the hands of speculators and large land owners.

The Airplane Conference at March Field is attended by twenty Forest Service representatives and a number of Air Service pilots and observers, in addition to a class of cadets. Districts 1, 5, 6, and the State Forester's Office of Oregon are represented. It is expected that the State Forester of California will later be represented. The conference opened February 20 and will extend approximately until March 20. The Forest Service representatives are scattered in barracks near the cadets and use the cadets' mess. The first part of the conference is being devoted to aircraft subjects, and the latter part will be given to Forest Service subjects, the idea being that at the end of the conference Forest Service and Air Service representatives will be able to speak a common language in the preparation of specific plans for cooperation during the ensuing season. It was planned for Mr. Kotok to be in attendance at the conference during the entire period. However, he was called to his home on account of illness and Mr. Pitchlynn is temporarily in charge. Mr. Johnston attended the first week and expects to be able to return for the last week of the conference.

California has been undergoing one of her periodical drouths, with the exception of the southern part of the State where early rains considerably relieved the condition. That portion of the State lying north of the Tehachapi, however, has had very little rain up to a week ago, with the consequence that there has been a heavy loss of stock, and the future outlook was not very encouraging to stockmen. Sheepmen along the Sacramento and San Joaquin Valleys were especially affected, in view of the fact that lambing season was on them without the necessary green feed. Twin lambs were usually killed when dropped, and a severe loss occurred on nearly all of the ranges. The rains, however, during the last few days have considerably relieved the situation.

The northern Forests have received as yet but little precipitation, and unless the present rain extends pretty generally and continues for some time, we may expect a very dry season on the Forests as a whole.

Little doubt remains but that the water supply will be short the coming season, which will result in a very much decreased hay crop for the following winter. Forest officers generally are looking to ways and means by which relief can be secured for the coming year. Some of our early ranges and ranges that might be used for winter grazing purposes have been used for the relief of meadow areas or the saving of hay which would otherwise had to have been fed to the stock.

District 5 - California District (Continued)

C. Wiley, who has spent the past month on the Santa Barbara Forest, has returned to the District office.

Frank Haynie has resigned after nineteen years' service in this Department to enter the employ of the California Home Industries League. He will be associated with former Supervisor Norman H. Sloane. Mr. Haynie entered the Government Service in the Bureau of Soils, was later transferred to the Washington Office of the Forest Service, and came to District 5 in 1907 as Clerk on the Tahoe. Later he was transferred to the Angeles as Chief Clerk, and in 1915 came to the District office as Chief of Maintenance. A few months ago he was designated Purchasing Agent to handle field purchases of forage, improvement materials, etc., in addition to the ordinary equipment procured through the District office. Early this year the Forester approved his assignment to Los Angeles as Supervisor and he was to take up his new duties there March 15.

It is with regret that we announce to the field force the resignation of Fred D. Douthitt as Grazing Examiner. Mr. Douthitt has resigned to accept a more remunerative position and one which will not require his long absences from home. He entered the Service back in 1913. He has gone successively from Field Assistant to Assistant Forest Ranger, then to Grazing Assistant, and Grazing Examiner. His resignation leaves a vacancy which it will be difficult to fill, for it requires the work of a man possessing all of those capabilities of Douthitt and the personality to go with them. He has been largely responsible for a great deal of the constructive grazing work which has been undertaken and accomplished in the District during the past few years. While we regret the loss, we wish him happiness and prosperity in his new venture.

F. R. Hicks of the Forest Products Laboratory is a visitor at the District office. He came here from San Diego, where he has been inspecting marine piling.

District 6 - North Pacific District

An unusually dry February, with several alarming brush fires, has given momentum to the campaign for Forest Protection Week, May 23 to 29. This campaign has for its slogan, A Smokeless Summer for Oregon - which all the fire prevention organizations of the State are uniting to achieve. The campaign as outlined is largely educational, reaching people through the press and through the medium of talks illustrated by lantern slides. The Forest Service is doing its part along both these lines, and the question of forest protection already is being brought home to the people, perhaps more effectually than ever before. After prevention of the loss of timber and forage, prevention of the pall of smoke that would hide beautiful scenery and thus handicap the "See Oregon first" movement is emphasized. The Forest Protection Committee of the Portland Chamber of Commerce, of which Mr. Cecil is a member, is specially active in this movement to bring about greater care in the use of fire in the woods and closer cooperation in fire prevention and suppression. A similar campaign is being carried on in Washington.

Forest officers need no longer be nonplussed when asked by stockmen for a description of the poisonous tall larkspur, water hemlock, death camas, etc. Grazing Examiner Peterson has had postcard-size photographs of these plants mounted on cloth, ready to be fitted into rangers' notebooks. Such photographs will be sent to field men likely to be asked for descriptions of the plants they illustrate. Undoubtedly the pictures will help greatly in familiarizing stockmen with the plants in question.

The ever apparent need of getting scenic areas covered with commercially valuable timber out of private ownership is brought home with special directness in this District, where logging operations menace the beauty of three waterfalls along Columbia River Highway, of the trail leading to Larch Mountain, and of Larch Mountain itself. Timber companies will "leave the watershed of Multnomah Creek in such condition that Multnomah Falls will be a wild flood at wet seasons, but a mere dribble during summer, when the greatest number of people traverse the Highway. Oneonta Creek will be similarly affected, and the peculiar gorge of that stream will be deprived of much of its charm. Even Wahkeena Falls will be influenced by the change in the drainage conditions. Larch Mountain, now a place of magnificent scenery, will be reduced to a scar." The public wants this region added to Columbia Gorge Park, that it may have the protection of the Oregon Forest. The timber companies cutting on Larch Mountain express a desire to receive stumpage from nonscenic lands for the lands they are now cutting. Concerted action will be taken in the interest of such legislation as will make it possible to effect exchanges whereby scenic areas may be put to their highest use, in accordance with the policy of the Forest Service.

"The Western Sportsmen," published at Seattle, has a Forest Service page. In the February number Mr. Kavanagh supplied a story entitled "Seeing America First." He makes clear the full import of the pledge given by the Washington Wool Growers Association, at its last convention, to cooperate fully with the Forest Service in its efforts to protect the game supply, enforce existing game laws, and conserve camping places and other recreation grounds within the National Forests. According to Mr. Kavanagh, this resolution indicates growing recognition of the mutual rights of economic and recreational interests. Mr. Kavanagh believes that the sympathy of those who visit the Forests in response to the "See America First" slogan will be with the sane and conservative mutual development of the recreation and economic possibilities of the Forests with a view to the future, even though some may be disappointed at not finding here the unrestricted hunting they had expected.

Forest Examiner E. J. Hanzlik has been in Portland conferring with the Office of Forest Management regarding completion of plans for the Sauk-Stilaguamish working circle, northern Snoqualmie, Washington. This working circle includes all the timber in the watersheds of the North Fork Stilaguamish and upper Sauk Rivers. The main plan is completed, and the policy to be recommended to the Forester for handling of sales on the area is now under consideration.

While check scaling on a Snoqualmie timber sale, Chan Bullen, Forest Ranger, was killed instantly February 27, by a log that rolled from a passing load. The accident occurred near Darrington, Washington, on the Sauk River. He had been a ranger since December 1, 1919, and employed as a temporary laborer and short-term guard since 1914, Chan Bullen's loss will be keenly felt. He was 25 years old and unmarried. His parents reside at Darrington.

T. Nagayama spent an hour in the Portland office during his trip around the world for the study of forestry, the lumber industry, logging methods, etc., which is financed by the Japanese Government. He has completed his observations in the Puget Sound and Columbia River regions and in British Columbia, where he visited important logging and lumbering operations, wood-using industries, forestry school of the University of Washington, veneering plants, etc. Mr. Nagayama is forester of Formosa, ceded by China to Japan in 1895. Here he looks after five billion feet of timber, penetrated by 80 miles of narrow-gauge railroad. He saw his first excelsior in this office, and marveled that such valuable material should be used for packing instead of straw.

Charles H. Flory, Superintendent of Alaska Forests, has been in Portland recently. He says that one of his principal needs is an adequate boat patrol for the thousands of timbered islands, with their 26,000 miles of coast line, that the Tongass and ~~Ketchikan~~*Forests are broken up into. Boats instead of trails are depended upon as a means of access from point to point on the Alaska Forests. The fire problem has not been particularly serious in Alaska. Most of the big fires there have not been on the National Forests, along the coast, but in the interior, where the timber is not yet under Federal protection.

A bobcat killed on the Oregon Forest measured 42 inches from tip to tail. For the average bobcat such measurement is about 24 inches. The skin sold for $12, and a $2.00 bounty was received from the county.

*Chugach

District 6 - North Pacific District (Continued)

Thomas P. Mackenzie, formerly chief of Grazing in District 6 and now a commissioner of grazing in Canada, stationed at Kamloops, B. C., visited this office recently to confer on grazing questions and meet old friends. He is enthusiastic over the good that comes from cooperating stock associations. He has organized 18 of these in British Columbia. along lines upon which the District 6 associations are organized.

District 7 - Eastern District

The Forest Management plans in this District have been progressing very rapidly of late. All the plans for the Nantahala watershed on the Nantahala Fore have been submitted and also for the Rock Island circle on the Arkansas Forest.

Mr. Eldredge has been on the White Mountain Forest for the past two weeks.

As the result of recommendations made by Mr. Brunner last year the Military Governor of the Dominican Republic issued an executive order on December 24, 1919, which created a Forest Service, provided for the establishment of Forest Reservation Areas, and empowered the Secretary of Agriculture to make the necessa regulations for their administration. Military Government may have its drawbacks, but it evidently can get things done without a lot of needless talking.

WHO WANTS TO BE A BUFFALO EXPERT?

For some time past the Branch of Grazing in conjunction with District 7 has been studying a plan for a regular, definite set of records covering the buffalo herd now grazing on the Wichita Forest. The idea was suggested by statements made by Dr. Palmer of the Biological Survey to the effect that no one knows anything of the history of the buffalo in relation to its breeding habits, how long it lives, the number of calves a female buffalo will bear, the number of each sex born, and various other related questions. Little or nothing is known of the buffalo's habits in many other ways and inasmuch as the herd on the Wichita is located where it can be carefully watched and is on a scale large enough to admit of obtaining concrete results, it is felt that systematic collection of informati regarding the animals should begin at the earliest possible moment. In addition to this it seems advisable to work up a "scale" by means of which the buffalo can be classified as to conformation, type, and other physical characteristics, exactly the same as is done with blooded cattle. This "scale," too, is something which has never been attempted heretofore and will offer opportunities for some important research work.

The present situation of the Wichita herd is rather precarious inasmuch as no records whatever have been kept along these lines owing to the fact that Supervisor Rush has been so busy and has had so many other things to attend to that he has not been able to keep track of such matters, although he has all the data in his head.

What the Service is now looking for is a bright, young ranger who has the necessary education, the love for animals, and the enthusiasm which will make him give the best there is in him to this work. If there is such a ranger in the Forest Service here is an opportunity for him to do a big work and eventually undoubtedly make for himself a name in the biological world.

Don't all speak at once, but here is the right job for the right man.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

March 22, 1920.

Mr. Sherman Appointed Associate Forester

Mr. E. A. Sherman, Assistant Forester in Charge of Lands, has been selected by Secretary Meredith, upon the recommendation of Colonel Greeley, to succeed Mr. Potter as Associate Forester upon the latter's retirement next month. The announcement was made by the Secretary on March 20.

Mr. Sherman is too well known for the Bulletin to attempt an introductio. In 1903 he was appointed Supervisor of the Bitterroot Forest Reserve, in Montana, as an officer of the Department of the Interior, and entered the Forest Service through the transfer of the administration of the Forests to the Department of Agriculture in 1905. He has played an important part in the progress made by the Service, and his appointment as Associate Forester is the logical result of his long experience as well as a recognition of his proven ability.

Research Gets Busy

Work has begun in earnest on the preparation of the report called for by the Capper Resolution. Research is busily engaged in getting the necessary machinery running smoothly and weighty conferences are the order of the day.

The data required to supplement that already available in the Service is being obtained in part by regional assignments. The Western Districts have been requested to secure information on the concentration of ownership, stumpage and mil prices, remaining stands, and the present rate of growth as contrasted with cutti and destruction. Similar data for the East is to be secured by Frothingham in the Lake States, Hawes in the northeast, Mattoon in the southern Appalachians, Zon in the southern pine region, and Cook in Mississippi hardwoods and cypress. In addition the Laboratory will supply information on wholesale and retail prices in the middle West.

An attempt will also be made to secure information on the effects of depletion and increased prices in selected industries. Pulp and paper industries will be covered by Hawes, naval stores by Eldredge, building, construction and railroads by Franklin Smith, furniture and veneer industries by Brush, and vehicle spoke and handle industries by Helphenstine.

All of the men named are up on their toes and ready to make the fur fly. Although some of the less technical members of the Washington Office who are not in on the work may intimate that the same old figures that have done duty before will be used again, Research rightly maintains that this is one of the most important assignments the Forest Service has ever had and asserts that the final report will be a humdinger.

Resistance to Decay now a Factor in choice of Airplane Wood

Airplanes in the past have been so short-lived that it has mattered littl whether the wood in them was resistant to decay or not. Now with better construction and less accidental breakage of airplane parts, instances are coming to the attention of the Forest Products Laboratory of parts needing replacement because of decay.

The fact is being recognized that many woods in common use for airplanes are not resistant to decay and may be destroyed very rapidly when exposed to unfavorable weather conditions.

Fortunately, there are woods whose value in aircraft has been demonstrate which are highly durable. Among these perhaps the most notable is Port Orford ced Two others which in tests made by the laboratory have proved very resistant to deca are southern cypress and California redwood. Douglas fir, white oak, and black walnut stand fairly high in durability. Mahogany and Spanish cedar are reputed to be very durable, but no tests have been made on them in the United States. Spruce, which has been the favorite wood for aircraft, is, unfortunately, appreciably less durable than any of the species mentioned. Likewise basswood, beech, birch, and maple may be classed with the less durable species.

Resistance to Decay now a Factor in choice of Airplane Wood (Continued)

The sapwood of practically all species decays readily. Hence in selecting wood for durability, only the heartwood should be accepted.

In cases where it is not practicable to use a naturally durable wood, the life of the wood part may be prolonged by giving it a preservative treatment. Sodium fluoride is a preservative which may be successfully used on parts that are to be glued. Coal-tar creosote, where its color and odor would not be objectionable, may be used for parts that are not to be glued. Decay in struts, propellers, and some other large members can be prevented by applying a coating of aluminum leaf. This keeps the wood dry, and dry wood does not decay.

Lumber Industry in New Zealand

The New Zealand Government has recently added 1,800,000 acres to its State forest, making a total of 10,590,000 acres. Of the total area, however, only 1,371,000 acres have a present stand of merchantable timber.

The total area planted by the State since 1896 is 35,158 acres. The planting in the North Island has been more than double that in the South Island.

It is expected that the importation of American oak and Douglas fir lumber will break all records, as there is at present a building boom and lumber of these kinds is very popular for interior finishing.

Who Wants a Siberian Forest Concession?

Long term concessions in the State Forests in Siberia are available under certain conditions, according to a recent commercial report. Forest districts will be leased to interested persons for a term of 36 years for exploitation and the construction of plants, i. e., sawmills, pulp mills, distillation plants, etc. One of the most important conditions is the manner of leasing these forests, which is accomplished not by the antiquated government trade councils, but by special committees composed of district representatives and representatives of public organizations. Competitors submitting proofs that they had expended large sums on the economic exploration of a given district are given preferences for the long-term lease of forests in that district. Under these laws the Government is foreseeing the colonization of districts subject to concession, and expects that roads, transportation facilities, etc., opened up by the concessionnaires may be used for the purposes of colonization.

The Board of Review

As a consequence of the very disastrous fire season in District 1 last summer it was felt advisable to take advantage, as much as possible, of the experience which was gained. To help in this a Board of Review was appointed which was composed of a member of the Washington Office, two members from other Districts, three members from the District 1 office, and three Supervisors. The purpose of this board was to discuss with the Supervisors and Rangers in District 1 the past fire season, and the details of individual fires, and to ascertain what methods of suppression were used, what success was had, and what lessons could be derived therefrom. As it was not practicable for the entire board to visit each Forest, the Forests were divided into three groups - the eastern Montana group, the western Montana group, and the Idaho group, and each group was covered by a sub-committee of the Board of Review.

The various matters relating to the 1919 fire season were gone into frankly and in considerable detail. At the conclusion of the visits to the Forests, the board met in joint conference at Missoula and spent some two weeks in digesting the material obtained and in the preparation of a summary of findings and recommendations. This summary has been mimeographed and distributed to the various Districts.

It is believed that the report as a whole will be found valuable not only to District 1, but to the other Districts as well. One of the difficulties in the past has been that we have failed to correlate and put on paper the large amount of valuable information gained through experience of each fire season and this has largely been lost to the Service as a whole. It was the purpose of the Board of Review to study this information and place it in such shape that it can be retained for future use. It was the feeling of the Board that a similar investigation should be made each year, if not by individual Districts, then for the Service as a whole. In other words, there should be some sort of a clearing-house through which important developments in the fire game could be recorded for future guidance. It is believed that a review of this kind would be well worth the cost and would mark a forward step in fire protection and suppression. The summary of the report follows:

"1. Man caused fires must be reduced. A very vigorous campaign of fire prevention should be instituted at once, directed particularly toward the local residents who are responsible for most of the fires. All known methods of prevention should be made use of, including newspaper publicity, signs, posters, lectures, circulars, personal contact, Forest Service aid to brush burners, and law enforcement campaigns.

"It is very important that a fire publicity man be added to the District office to lead the work. Systematic training of some of the rangers in law enforcement should be initiated along the lines of the District 5 "arson squad.'

"Legislation covering railroad fires is particularly needed.

"The application of campfire permits to selected parts of the district is recommended. Also a comprehensive program of improving campsites.

"A further attempt should be made to secure cooperation from the public in the matter of preventing fire. If this is not successful it may be necessary to enforce further restrictions on the use of the Forests by permit or otherwise.

"A fire prevention week for concentrated fire prevention publicity should be established.

"2. The efficiency of fire protection work has suffered particularly by the lowering in general standard of the ranger force, due to inadequate salaries. Too many inexperienced men are in charge of ranger districts, and in many cases it has been necessary to retain men in the responsible capacity of district ranger who have not qualifications commensurate with the importance of the position. An adequate revision of salaries is essential to securing the personnel required to handle the fire situation and to hold the good men now in the organization. An increase of 25 per cent in the ranger force is required to adequately handle protective work, largely as assistant rangers. This may be accomplished in part by the assignment of men to the eastern Montana Forests who would regularly be transferred to western Montana and Idaho through the fire season.

"3. A higher standard in the temporary protective force must be reached. Good men can be obtained for smokechasers, lookouts, and patrolmen if the Service pays enough to get them. A general increase of at least 25% should be made in salaries of the protective force, even though it temporarily means reducing the number of men. More systematic training and instruction of guards should be instituted.

"A nucleus of the protective force should be retained the year round. One way to do this is by instituting Government logging, which has been definitely recommended.

"4. The present improvement policy must be modified. Much more money must be devoted to opening the inaccessible country with passable trails rather than devoting the major part of the appropriation to roads and high class trails as at present.

"5. Too much reliance has been placed on temporary overhead for fires. Much inefficiency in fighting fires was due to this last summer. It is essential that most fire bosses and foremen be a part of the regular protective organization imbued with the Service spirit and primarily interested in getting the fires out. This means selecting such men at the beginning of the season and putting them in as improvement crew foremen or in some cases as patrolmen or smokechasers where they can be replaced when they go on a fire.

"6. More widespread knowledge of the art of fire fighting is needed. Many of our smokechasers and some of our rangers do not know how to fight fire. This means systematic training and instruction by conferences, use of fire manual and special training by our best fire fighters detailed for that purpose. Annual or periodic training camps are recommended which will include among other things training in the art of fire fighting.

"7. The ideal should be to get away from use of large crews assembled for fire fighting. In the last five years, 4½ times as much has been spent for fire fighting as for the regular protective force. It is confidently believed that in the next five years, if the regular protective force is greatly increased to the extent of providing a sufficient number of small crews to handle most fires when small, the total cost of fire protection will be less and the losses from fire greatly reduced. This will probably mean at least doubling the present allotment for protection in the District as a whole.

The Board of Review (Continued)

"8. Temporary crews brought in from the outside to fight fire in the more inaccessible regions of the Forests, after the fires have attained considerable size, have proved almost useless. This practice should be abandoned in the future and a force amounting in cost to about 80% of the average expenditure in the past for protection and fire fighting should be put on the ground early in the season, with the expectation that they will handle the situation without additional men. This plan should apply to areas more than 15 miles from a railroad or automobile road. It is believed that it can be financed to a considerable extent next year by the use of the improvement fund, placing the men in small crews on improvement work with primary reference to their value in fire protection. Allotments of improvement funds under such conditions should be made on a crew basis.

"9. Cooperation with local residents has not been developed to the fullest extent, particularly in western Montana and Idaho. Much more extensive use should be made of so called "per diem guards," responsible residents placed under informal appointment, with a definite understanding as to their duties, authority, and compensation.

"10. Inspection Standards.

(a) Supervisor should visit each ranger personally before fire season and go over fire plans with him, preferably at his headquarters.

(b) The Supervisor or his representative should visit each ranger at least once during the fire season. A written record of such inspection should be made.

(c) District rangers should visit each lookout and smokechaser or patrolman station at least twice before July 15 and twice after July 15.

(d) The ranger should get on as many fires as possible and should at the end of the season submit a statement of the number of class, A, B, and C fires visited, and number of visits to each guard.

(e) The District Forester of his representative should make at least a partial fire inspection of each Forest every season.

"11. Arrangements with the War Department are advocated to provide soldiers for third line of defense on accessible areas."

Pinchot made Commissioner of Forestry of Pennsylvania

Gifford Pinchot, formerly head of the Forest Service and known by name at least to everybody in any way interested in forestry, has been appointed Commissioner of Forestry of Pennsylvania. Commenting editorially on the appointment, the Philadelphia North American said:

"Governor Sproul can remember, although he is still a young man, a time when the complacent belief was general that Pennsylvania had an inexhaustible supply of timber; yet he has witnessed a transformation so drastic that last year this state paid $25,000,000 for lumber brought from the far west, and $25,000,000 additional for freight charges on it.

"Exceptionally familiar with the physical attributes of the entire commonwealth, he knows the dreary spectacle of the denuded mountains and hills, whose unprotected slopes, gashed and gullied by the rains, begin to foreshadow the desolation of western China. He has witnessed, too, the marvelous results of scientific reforestation in European countries. These are demonstrations which arouse his instincts as a business man.

"He has the vision, also, to see a future when these barren areas--5,000,000 or 6,000,000 acres in extent--will be covered with forests, providing, under intelligent supervision and regulation, a perpetual supply of timber for all of the state's needs; to understand how reforestation will check destructive erosion, insure the preservation of our sources of water supply and go far to prevent disastrous floods, besides opening up vast tracts for the healthful enjoyment of the people.

"And business capacity, again, reveals to him that this great work, which would justify itself even at heavy cost, can be carried out almost from the beginning on a profitable basis; that conservation and reforestation in time will yield revenues sufficient to lighten materially the increasing burden of taxes.

Pinchot made Commissioner of Forestry of Pennsylvania (Continued)

Possessing this knowledge and this vision, together with a genuine desire to serve the state, it was inevitable that Governor Sproul should seek the man pre-eminently qualified for the task. An executive of smaller caliber would have hesitated to give high place to a man of Pinchot's fame and stature; but the governor evidently gave first thought to the interests of the state.

"Pennsylvania is to be congratulated that Gifford Pinchot, like the good soldier that he is, obeyed the summons to hard work and responsibility, and that it has a governor big enough to give such convincing evidence that his supreme concern is the welfare of the commonwealth."

Board of Survey and Maps

The Board of Maps and Surveys created recently by Executive Order of the President, has organized and is now ready for business. The intention of the President's order, which will be carried out by the members of the Board, is eventually to bring within the jurisdiction of the Board all map and survey work now carried on by a large number of bureaus in the governmental departments. The Board will endeavor in every possible way to cooperate with the Forest Service in order to secure prompt action on requests for surveys or maps in the field. The Geological Survey will probably handle the field work as soon as it is in a position to do this work when and where requested.

The question of funds is one that has not yet been thoroughly worked out. If we have money for survey work, and the Geological Survey can do it for us, payment can be adjusted through a treasury settlement. While the present procedure is not altogether satisfactory, it is the only way possible until Congress passes a law authorizing transfer of funds for such purposes between departments prior to the performance of the work. It is generally felt that we should drop all map making and survey work that can be performed more economically and satisfactorily by some other agency. These activities are mostly confined to two lines -- timber reconnaissance and grazing reconnaissance. As a matter of fact we have for some time been doing this work only on areas covered by Geological Survey maps and unless special emergencies exist this policy would be continued.

Timber reconnaissance will be planned along the same lines, although it may be necessary in certain instances to request the Geological Survey to make surveys for which funds are now provided and which can be turned over to the Geological Survey under treasury settlement.

Washington Notes

Arthur M. Cook of the Madison Laboratory is in Washington in connection with the work on the Capper Resolution.

S. T. Dana has completed his work with the Reclassification Commission and has returned to the Forest Service as Assistant Chief of the Branch of Research.

Gifford Pinchot, newly appointed Commissioner of Forestry for Pennsylvania, came in to make application for Federal aid under the Weeks Law last week. He appeared much pleased with his new job and announced his intention of spending most of his time in the woods.

Capt. Stanley L. Wolfe has been notified by the Grand Chancellor of the National (French) Legion of Honor that the President of the French Republic has conferred upon him the Decoration of Knight of the Order of the Black Star.

This is the second honor which Capt. Wolfe has received, the first being a citation by the commanding general of the A. E. F. for "exceptionally meritorious and conspicuous services."

District 1 - Northern District

An error in the figures submitted by the Kaniksu, which were used in making the fire ratings, has necessitated a change in the final "score." The revised "dope" puts the Kaniksu at the top of the list of the western Montana and Idaho group instead of the fifth place. The standing of the Clearwater has also been changed. The final score follows:

Forest	Rating
1. Kaniksu	86.90
2. Kootenai	86.30
3. Lolo	82.30
4. Pend Oreille	81.44
5. Coeur d'Alene	77.60
6. Blackfeet	77.47
7. Bitterroot	75.34
8. St. Joe	75.24
9. Flathead	65.92
10. Missoula	58.65
11. Clearwater	55.50
12. Nezperce	48.37
13. Selway	25.10

COST OF FIRE LINE CONSTRUCTION

The Forest Service urgently needs data on the cost of fire line construction, or more particularly on the number of man days per mile under varying conditions. This data is desirable not only for comparison of efficiency of different jobs, but to enable the man in charge of a fire to estimate with reasonable accuracy what headway he can expect to make against a fire with the crew available. The whole plan of attack is often dependent on how long it will take to construct a given piece of fire line.

This data can be properly collected only in the field, and can even be secured during the rush and bustle of the fire season. The foreman or fire boss is constantly going over the fire line and should get into the habit of pacing the amount of line built daily. The time keeper can easily correlate the daily mileage of line with the number of men at work. Rangers and fire assistants should keep this in mind and secure all the data possible. Even a single day's record under carefully described conditions is of value.

The Nezperce has made a good start in this direction and the Clearwater has also compiled some figures.

District 2 - Rocky Mountain District

ON BEING BOSS.

It is not uncommon for a man having authority over others to take the attitude that this authority should always be in evidence--stick out like a sore thumb, so to speak. This is all wrong in this particular day and age. The less that men feel you have this consciously superior attitude, the better they will like you. If they don't like you, you are under a disadvantage from the start. These observations apply, of course, only to such men as are really trying to earn their money--it makes little difference whether the other kind like you or not.

Following are some points worth mentioning in connection with the subject under discussion. They have been suggested by the writer's experience in the Forest Service.

If a man does a piece of work well, don't hestitate to tell him so; a man likes to know when he is doing well and getting some credit for it. On the average, the danger of giving him the big-head is small compared with the advantages of this course.

District 2 - Rocky Mountain District - ON BEING BOSS (Continued)

Encourage suggestions as to improvement in methods of doing work. It is often the case that a new man on the job will see chances of this kind where they have never occurred to the man in charge. To the extend that men feel you are not "above" them they are likely to offer suggestions of this sort.

Treat men as nearly alike as possible. In this connection don't let personal feelings of dislike toward a man stand in the way of giving him a square deal. Also, be wary of making a confidant of any one of the men to the extent of criticizing the others in your conversation with him. I knew of a case where a member of a planting crew reported faithfully back and forth from the boss to the rest of the crew, telling the men what the boss said and vice versa, no doubt adding and embellishing where necessary to make his messages sufficiently interesting. Naturally all this had a bad effect on the morale of the crew.

As opportunity offers, take hold and work with the crew. It is often the case that concrete examples of industry of this kind have a favorable effect in encouraging the others.

--Turner, Nebraska.

"Unrest in the Forest Service, its present extent and seriousness," was the subject of a paper read by Supervisor Arthur T. Upson, Supervisor of the Pike National Forest, at the Supervisors' meeting in Denver, in which a number of pertinent facts regarding labor turnover in the Forest Service were presented. The unrest in the Service was classed as resolute unrest and hesitant unrest. Resolute unrest was defined as a disquiet of mind which becomes so aggravated as to cause the officer to leave the Service; hesitant unrest is that which exists among certain members but which has not become so serious as to cause the officer to leave the Service. It may be as serious as the former, although the affected member may be prevented from leaving the Service by love of the work. The figures taken from the records of the Service as a whole for two years before present conditions came into existence show that for 1912 and 1915 the turnover in the Service, based on the number of resignations reported, was approximately 8 per cent. In the fiscal year 1919 figures for the District 2 Forests and the clerks in the District Office showed that the turnover was 19 per cent. In order to secure the latest possible data, the figures for the calendar year 1919 were compiled and showed an average turnover of 15 per cent. The figures furnished by the Denver Civil Service for two departments showed an average turnover of 5 per cent, while those for the Denver City Tramway Company showed 29 per cent.

Mr. Upson pointed out that while the unrest in the Service was considerably more in 1919 than in the previous normal years, it was midway between the low figure for the Denver Civil Service and that given by the tramway company. Apparently the unrest up to July 1, 1919, was greater than since that date. Commenting on this Mr. Upson says, "It is believed that there is a very definite reason for this. Notice of real efforts to secure increased salaries and reclassification did not appear in written form in the Weekly Washington Bulletin for the information of all until about midsummer. Hence there was little for rangers and clerks to look forward to prior to July 1. In other words, information on efforts to secure higher salaries bore fruit as soon as announced and the resolute unrest among rangers and clerks decreased and became more properly of the other class - hesitant unrest."

A constant recruiting of new men for the Service and considerable time and pains in this connection was advocated by Supervisor Robert E. Clark of the Leadville National Forest at the Supervisors' meeting in a paper entitled "Best Methods of Recruiting and Training New Men." Supervisor Clark takes the stand that every employee of the Forest Service should be constantly on the lookout for promising men who might be secured for the organization. Field employees, he holds, should endeavor to interest such of their friends as are good Forest Service material in our work and to lead them to think of getting into it. In this way we will constantly have a promising crop of Forest officers coming along who will be available to fill the vacancies caused by resignations.

District 2 - Rocky Mountain District (Continued)

Supervisor Clark also emphasized the necessity for carefully training men who are new in the Service. He feels that the Supervisor is in a particularly important position as regards work of this kind and that it is very easy to spoil a good man through bad handling. Too often, stress is laid on efficient accomplishment of the individual job to which new men are assigned with little thought being given to the spirit with which the work is done. This, he maintains, is the wrong attitude to take and thinks that the spirit behind the job is worthy of unlimited consideration and whn possible, should be developed first.

District 3 - Southwestern District

Oh Biology, what crimes are committed in thy name. The Idaho game law declares that "for the purposes of this act, bullfrogs are hereby classes as game fish." This sort of classification would make Cuvier or Agassiz turn over in his grave. We rise to suggest that rattlesnakes be classed as fur-bearing mammals and Gila monsters as range-destroying rodents.

California goes Idaho one better by classing cottontail rabbits and house finches as predatory animals. This gives a picture of Native Sons chased over the high Sierras by ravening packs of bunnies, or babies devoured in their trundlebeds by vulturous house finches.

Highbrow stuff from the Wisconsin game law: "'Wild Animal'" means any mammal, bird, fish or other creature of a wild nature endowed with sensation and the power of voluntary motion." This conveniently embraces everything from an amoeba to a megatherium.

"The past month was again the occasion of the overflow of the Roosevelt Reservoir, the maximum depth over the spillways reaching 7 ft. 5.7 inches. The road down Salt River below the dam was submerged for a distance of about four miles but fortunately, outside of injuring the surfacing, no serious damage was done. The road is being repaired by the Salt River Valley Water Users' Association

On the morning of March 1, 1920, a Rocky Mountain sheep, apparently attracted by the beauty of the Roosevelt Dam at flood stage, ambled down the mountain side at Roosevelt, Arizona, and spent an hour or more admiring the sights. The sheep appeared to be very much interested in the buildings, the people, and the automobiles, approaching to within one hundred feet of an automobile for a close inspection, but a truck with the muffler open came around the bend and the sheep bounded off up the mountain with a grace and dignity equaled only by others of it's kind. This is the first time in many years that Government Hill has been visited by a mountain sheep, but the appearance of this one is evidence that there are stil a few of these noble animals in this locality and everyone should take an active interest in their protection and propagation.

The appointment of James A. Scott of the Gila as Supervisor of the Tusaya has been announced by the District Forester. Mr. Scott's selection for this important position follows thirteen years continuous service in the District, first on the Lincoln and later on the Gila. Entering the service in 1907 as a Forest Guard, Mr. Scott has passed through the successive steps steadily to the Supervisorship of the Tusayan. In addition to general administrative work, Mr. Scott handled a considerable part of the Lincoln land classification in 1914-15. The long delayed transfer of Deputy Supervisor Grubb from Williams to the equivalent rank on the Coronado will now be accomplished about April 1. During the six months that have elapsed since the departure of former Supervisor Yarnall, Mr. Grubb has ably handled the Williams office under an unusual stress of unfavorable personnel circumstances.

Supervisor Wales recently contributed an article to the Tucson "Citizen" on National Forest Grazing, setting forth the chief ideas back of grazing regulations.

Due to after effects from the flu, Ranger Chipman has been advised by his doctor to live at a lower altitude and he is accordingly being transferred at once to the Aravaipa District of the Crook.

District 3 - Southwestern District (Continued)

Ranger Lamirand of the Lincoln has resigned after eleven years of faithful service. Ill health is given as the reason and he plans to try a lower elevation for a year or two. Lamirand spent his first four years in the service wrangling buffalo and other game on the Wichita. We are sorry to see him go and hope the change will be so beneficial as to enable us to welcome him back to the ranks at some future time.

The Santa Fe New Mexican in its excellent photogravure section, had in the issue of Sunday February 22, a full page of illustrations of activities on the Santa Fe. This is not the first time that this paper has presented to the public in such a graphic and artistic manner the beauties and meaning of the Santa Fe Forest to residents of New Mexico.

The latest description of a Bolshevik fits the bill graphically, completely, specifically: "A brain storm surrounded by whiskers."

It will be of interest to present Forest Service men to know some of the results of the attempt to get in touch with ex-service men of this District. Two hundred and seventy-two individuals were written in January explaining the idea in building up a list of correct addresses and keeping these former wearers of the pine tree badge in touch with new service developments. Of those written, one hundred and fifteen answered and all except four or five wished to maintain relations through a news bulletin. Many good suggestions were received. In addition, a good many letters were returned unclaimed on account of incorrect address.

The distribution of replies geographically was interesting since postmarks from eighteen different states are in the collection. The most remarkable showing was in the trades and lines of work now followed by these men - over forty widely different pursuits being represented. The showing in this respect reflects creditably on the versatility and adaptability of service men generally, a well-known fact.

Farming and stockraising headed the list with thirty-five men in this pursuit; in business lines, there are a feed and fuel dealer, two life and fire insurance agents; one furniture and rug dealer; a contractor; three merchants; two brokers; one salesman; a real estate man; one restaurant keeper; even two Ford dealers. Following engineering lines are two in mining; one ship builder; a draftsman; engine equipper; two civil engineers; one oil well driller; and one coal miner. There are also eight forest school professors; an alumni secretary; an artist; the curator of a museum; two lawyers; the manager of a telephone company; the secretary of a big cattle growers' association; and two assistant state foresters. One is a wood manufacturer; three are deputy sheriffs.

On the 18th to 27th of January Harold D. Steele cut 2737 cedar posts on the Coconino National Forest without permit, some of the posts being shipped to Holbrook. Some were hauled to the railroad at Angel and the rest had not been removed when the trespass was discovered. Steele was arrested at Holbrook and taken before the United States Commissioner at Flagstaff where he gave bond for appearance at the March term of court at Prescott. Later he left and went to Santa Fe where it appears he secured funds and on February 14th, he came to the District Office for the purpose of making a settlement of the trespass. He was allowed to sign a plea of guilty to the criminal trespass charge, and gave a certified check for $100.00 payable to the clerk of the United States District Court, District of Arizona, to cover his fine. He also made a payment of $124.38 to cover the value of the posts at Holbrook. A further payment of $148.04 will be necessary before he can secure the release of the rest of the posts.

New Member of District Office: "What is the meaning of Allotment Sheet B. D. - N.F.?" Old timer: B D-N 'F I know.

District 3 - Southwestern District (Continued)

Forest Ranger D. S. Marks of the Apache National Forest has resigned from the Service, effective March 31, and has accepted a position with the Lie Land & Cattle Company of Gila Bend, Arizona. Mr. Marks has been a ranger on the Apache since March 1, 1917. We regret very much to lose him from the Apache force but extend to him our best wishes for his future success.

Harry E. Colter, Manager of the Fred T. Colter ranches and cattle business at Colter, Arizona, is engaged in an interesting experiment with astragalus mollisimus, commonly known as 'loco weed.' He has 9 men working about 5 miles north of Springerville destroying the weed. To date, they have chopped out and hauled away about 100 wagon loads.

Again we are face to face with the specifications and bill of materials of a happy hunting ground visioned by a far away dweller tired of the flat country. This time from Texas. Here are some of the makin's of this land of bliss. Do you know where it exists?

Malaria free; plenty of springs, sufficient coyotes, bob cats, lions, etc., to make it "interesting and enjoyable" for a dweller on a mountain homestead between fishing and meat hunting trips and to provide a bit of loose change from bounties and hides. Also a good site for a hunting cabin, lots of rim rock and cliffs, and the "earth covered with pine timber and the rocks small." In addition our correspondent wants to know the size of the mountains by length and width.

All of which being duly answered to the best of our ability, we roll one, and take from our action basket the next inquiry of a far away citizen standing in the spud patch with his hoe idle, while his fancy roams to the high hills down under the Western horizon.

The building of roads and trails to make the National Forests more accessible is one of the foremost constructive purposes of the Service, and much is being done toward that end. It should not be overlooked, however, that making it easy to reach remote parts of the Forests will natrually increase the amount of travel and the number of campers, the majority of whom are unfamiliar with the means of preventing disastrous fires. Education of the public in fire prevention is imperative. One of the simplest and at the same time most economical methods of accomplishing this object is by the preparation of campsites at the most suitable locations along the roads and trails. Campers will use these sites and doing so, will become familiar with the proper methods of protection through the actual contact with properly cleared grounds and warnings posted thereon.

Scaler C. E. Thomson of the Coconino has resigned from the Service to enter private employment in California. The good wishes of District 3 go with Mr. Thomson to his new field.

We understand that Ranger McLure has just purchased a fliver and that Ranger Painter is contemplating trading his off for a span of mules or a milk cow. Any comment?

They say it happened on the Prescott many years ago. The letter the Supervisor received was something like this:

"Dere Sir:

I understand as how us permittees is entitled to $10 worth of free use. I've took $7 worth posts. Plese send me balance in cash."

District 4 - Intermountain District

Supervisor DeMoisy of the La Sal Forest writes that the 600-foot steel bridge across Grand River at Moab on that Forest is being raised four feet in response to a warning sent out by the Weather Bureau that unprecedented floods could be looked for this spring. This season's snowfall on the Grand River watershed is greater than ever recorded before and its water content is unusually high. The raising of this bridge, which was built at a cost of $50,000 in 1912, is an engineering feat that we expect to witness with considerable interest. The expense is being borne by the State of Utah, the bridge being on the Thompson-Blanding post road project which is now under construction.

District 4 - Intermountain District (Continued)

The snowfall in the region of the Payette Forest headquarters is the lightest for years. Only about 4 inches have fallen in Emmett during the month of February. The precipitation for February so far is 2 to 3 inches below normal for that part of the country. Snowfall in the mountains is also very light, and unless an abundance of the "beautiful" comes during March, an early fire season will doubtless result.

Ranger Hickman of the Powell-Sevier narrowly escaped very serious injury in an automobile accident recently. He and two other companions were driving a high powered Twin Six automobile in a blinding snowstorm. Some gravel and boulders had been washed from some embankment across the road, and which could not be seen on account of the windshield being covered with snow. They must have been driving at a good rate of speed since the machine was very badly damaged. It is estimated that it will cost $1000.00 at least to put it again in working order. All the occupants of the car, however, escaped with only minor injuries. Ranger Hickman received a severe cut on the side of the nose that required three stitches to close.

Forest officers have excellent opportunities to make sawmill operators familiar with some of the fundamental principles set forth in Mr. Seerey's bulletin on "Small Sawmills." It may be that some present mill operators are not acquainted with this bulletin, although at the time of its publication copies were widely distributed. Here is a chance for some effective cooperation with sawmill men, which besides being beneficial to their interests will react favorably on your timber sale administration.

A bunch of clippings from the Pinedale Roundup, published at Pinedale, Wyoming, indicate that the local Forest officers on the Bridger are taking a very active part in local community development. Among other projects in which the local members of the Forest Service are taking active leadership are, one to secure an accredited High School for Pinedale, and another, to secure a new mail route between Rock Springs and Pinedale by way of Ely, Farson and Elkhorn.

Grazing Examiner Bryant S. Martineau, after twelve years connection with the Service, has tendered his resignation to engage in the bakery business at Logan. Mr. Martineau promises to stake any member of the office who calls on him to a couple of doughnuts. We predict he will have many callers.

Some protest has been made with reference to the proposed action of the Service to eliminate aliens in order to admit citizens and to prevent reductions on established preferences of citizens. The protests so far have simply been to the effect that the Service should give aliens advance notice, perhaps of a year, before action is taken to eliminate them from the Forest.

Supervisor J. B. Lafferty of the Weiser Forest has tendered his resignation to take effect March 31. Mr. Lafferty is well known by almost every member of the District and it is with much regret that we see him leave the Service. Supervisor Lafferty has been in charge of the Weiser ever since that Forest was created, first as "Ranger in Charge" and since November 1, 1906, as Forest Supervisor. He was first appointed on the Sawtooth on April 4, 1906, as Deputy Forest Ranger, but in a month was transferred to the Weiser.

Supervisor Shepard in the "Cache Register" says "Our old acquaintance Xavier Servel has again made a substantial contribution to Uncle Sam's coffers in the way of the payment of $420 in settlement of a grazing trespass committed last season. Mr. Servel is one of our most consistent contributors along this line, having now paid in a total of $720 on three separate trespass cases occurring within the past two years."

We notice that the Sawtooth claims Mt. Hyndman. Where do they get that stuff? The Lemhi-Sawtooth boundary exactly splits this mountain, leaving the best and most scenic part on the Lemhi. In fairness this fact should be published. (Sic em!)

From the Lemhi.

Ranger Parley P. Peterson, who is being transferred from the Ashley Forest to the Dixie, reported his arrival at Modena to the Supervisor at Cedar City on March 1. Ranger Peterson will take charge of District 1 of the Dixie with headquarters at Enterprise.

A report from E. V. Storm, who is taking measurements for the Great Basin Experiment Station this winter, indicates that on February 28 there were the following depths of snow on the Manti Forest:

50 in. at 10,000 ft. elevation
40 in. at 8,750 " "
12 in. at 7,200 " "

These depths are below normal by approximately 12 inches, but the amount of water contained in the snow is higher than usual, due to the fact that there was an unusually heavy fall early in the winter which has packed very solidly.

Almost every Forest has reported that the recent snowfall has relieved the situation in its locality considerably.

One exception to this seems to be the Sawtooth. Supervisor M. S. Benedict says, "The much hoped for snow failed to materialize during February. Total fall to date is about one-half the average for the past ten years. No water! No feed! No friends!"

The Cedar Lumber & Commission Co., which has made an informal application for a sale of fifteen million feet of timber on the Cedar Mountain on the Dixie Forest has dispatched its manager and one of the members of the Board of Directors to the northwestern states for the purpose of inspecting timber operations and gathering data on medium sized sawmills in anticipation of increasing their timber business during this year. The trip will probably occupy about three weeks. The Supervisor is anxious to see the Cedar-Long Valley Road completed, at least to the summit of the mountain, this season since the sale of the timber mentioned above is dependent upon the completion of the road, there being no other route by which the lumber can be brought down the mountain.

It was formerly announced that Deputy Supervisor Pearson, now on the Weiser, would be transferred to the Caribou Forest to be Deputy Supervisor of that Forest. It has since been necessary to retain Mr. Pearson on the Weiser owing to the resignation of both the Supervisor and Clerk there. Mr. Strong, now Deputy on the Payette, has been transferred to Montpelier to become Deputy Supervisor of the Caribou in his stead.

Lyle F. Watts formerly Deputy Supervisor of the Boise Forest has been made Supervisor of the Weiser Forest to succeed J. B. Lufferby, resigned. Forest Supervisor W. M. Campbell of the Minidoka Forest, has been transferred, at his own request, to the Boise in the capacity of Deputy Forest Supervisor, and Forest Examiner R. D. Garver of the Uinta Forest has been promoted to the Supervisorship of the Minidoka.

"'Pine boughs bearing acorns were used as decorations,' says the San Francisco Chronicle. OH BOY! That climate is simply wonderful."

There have been reported from the Forests of this District a total of sixteen associations actively interested in fish and game matters representing eleven different Forests. Of these, eleven are in Idaho, four in Utah and one in Nevada. There are at least two others in Utah, the Weber County and Box Elder County Organizations, not directly interested in any National Forest areas. Ten of the sixteen are strictly fish and game associations, the others being commercial associations, boosters clubs or rifle clubs having, nevertheless, an active interest in fish and game matters.

District 5 - California District

Stockmens' Week at Davis

Stockmen's Week at the Davis Farm this year, from February 24 to 26, marks an epoch so far as National Forest ranges are concerned.

While the attendance of National Forest permittees was not as large as was anticipated, the lack of attendance was made up by the interest manifested by those who did attend, and by the further fact that for the first time since sales of pure-bred stock have been held at Davis, 25 head of these animals were purchased by National Forest permittees. These stock will go to the Lassen, Tahoe, Eldorado, and Sierra Forests.

The average paid for purebred Hereford cows was $396; for bulls, $412; for Shorthorn cows, $420; for bulls, $436.

By the introduction of this class of stock on the National Forest ranges we are on the way to secure the maximum production of meat during the given length of time for the same amount of forage consumed by the scrubs.

It is to be hoped that the purchase of these animals by Forest permittees will increase the interest among stockmen, and that next year a much larger delegation of Forest permittees will visit the Davis Farm. Forest Rangers Simpson, Clark and Lorenzen, and Deputy Supervisor Jones, are to be congratulated on the excellent papers which they read at the meeting.

The following extract from a letter from Supervisor Durbin of the Modoc, throws further light on the carefree life of the forest ranger:

* * * * *"We put in the last link of the Devil's Garden telephone line last winter. We put up the tents before the storms set in so as to keep the ground dry, but the first night the fellows were in camp the thermometer went down to 34° below zero. I never saw it get cold so fast. Sometimes there would be a change of 5° in an hour. I drove out to camp the next morning, intending to bring the rangers into town to stay until it warmed up a little, as I expected to find them hibernating or frozen beyond recovery. However, I found them all jumping around building bunks and cutting wood. They claimed that the tents were just as warm as the Niles Hotel and much warmer than the road to Alturas, so I tucked my tail and went back home, feeling that the Modoc bunch had some little grit."

Forest Ranger Frank W. Harley, who for a number of years has been in charge of the Orleans District on the Klamath, has resigned effective April 30 to go into the ranching business. Mr. Harley owns a ranch on the Klamath River which is being made accessible by the new Klamath River road.

Mrs. Gyllstrom, the chief clerk of the Cleveland National Forest, has resigned effective March 15. Mrs. Gyllstrom has been anxious to leave the Service for several months on account of personal affairs but has continued in the office until such time as the Accounts and Property records could be transferred to the Angeles office where they will be handled by Mr. Lackey and Mr. Sears respectively. Mrs. Gyllstrom's many friends in the Forest Service very much regret seeing her leave our ranks.

Mrs. Leech, one of the able standbys of the Angeles office, has resigned, effective March 10. Ill health, which has pursued her for a number of months, is responsible for a decision on her part to give up her efficient duties. We are in hopes that an absolute rest will restore her health within a short time.

Mr. Redington left on the 9th for a few days trip to the Angeles and Santa Barbara.

Shirley W. Allen has been named Forest Supervisor of the Angeles. He will report for duty as soon as he can pack his household effects and transfer from Yreka to Los Angeles. During the early days of the District Mr. Allen was Deputy Supervisor on the Klamath and Lassen. A few months ago he was transferred from the Forest Products Laboratory at Madison, Wis., back to District 5 as Forest Examiner on the Klamath.

A.S.Nash-Boulden has been designated Forest Supervisor of the Cleveland, and will assume his new duties on March 10. Mr. Boulden has been acting in charge of the Cleveland since Mr. Tillotson's resignation became effective.

District 5 - California District (Continued)

Announcement is made of the assignment of Forest Supervisor Thomas W. Sloan to take charge of the Santa Barbara on March 15. It was originally planned for Mr. Sloan to go to the Cleveland; however, the transfer of Supervisor Hall from the Santa Barbara altered these plans.

Benjamin J. Hoffner, Forest Ranger on the Sequoia and previously Forest Clerk in District 4, has resigned. Mr. Hoffner, we understand, will go into business with his father in San Diego.

Miss Vivian Vernon, recently appointed clerk on the Modoc, resigns to take a position with a local bank.

Ranger John C. Davis who is attending the training school at March Field reports that while he enjoyed every minute of his first trip in an airplane, it seemed good to see that the ground had not moved from its natural position while the machine was turning over several times in the air.

District 6 - North Pacific District

While cutting through a dead but thoroughly sound Douglas fir some four feet in diameter, a Siuslaw ranger recently discovered, about 150 rings beneath the bark of the tree, a blaze made by a sharp edge, not an Indian's stone axe. A living tree, which had grown on the upturned roots of the dead fir, was 50 years old. Consequently the blaze must have been made more than 200 years ago, or over a century before the coming of Lewis and Clark. The blaze was between 30 and 40 feet up on the trunk of the tree and the whole side of the tree appears to have been stripped of its bark. Careful examination shows that the mark could not have been a scar resulting from the fall of a tree, or some other accident. The tree was about nine miles from the ocean, near Heceta Head, a high point named for Bruno Heceta, a Spanish explorer who made several cruises along the Oregon coast during the first half century. The section containing the blaze is on exhibition in the office of the Forest Supervisor of the Siuslaw.

A bow and arrow, massive book ends, properly finished with felt, paper weights, and a cribbage board and pins, made by Forest Examiner C. J. Kraebel and Supervisor G. F. Allen of the Rainier Forest from Pacific yew (Taxus brevifolia) are being exhibited in the District library, where they have aroused considerable interest. The red bark, white sapwood, and rose-red heartwood make a most attractive combination, and the excellent finish brings out to advantage the fineness and wavy variations of the grain of the wood. The articles were made from yew which was seasoned at the Wind River Experiment Station during Mr. Kraebel's absence in France, and show evidence of careful and skillful carving. They prove that the yew is well adapted to wood carving and is suitable for cabinet wood, although it will probably never be important for the latter use on account of its insufficient quantity.

The bow and arrow which were made by Supervisor Allen recall that this yew has long been known as the best of all yew woods, and is still used for this purpose. In fact the Snoqualmie Forest has made a sale of yew to a bow maker. On account of the scarcity of trees of suitable size, men were employed to hunt for these trees and to work the wood up into staves which were packed out of the Forest on the men's backs.

George H. Peterson, ranger on the Tongass, has "gone back home" after a detail in the District Office, where he aroused in other members of the Service something of his own enthusiasm regarding Alaska. He has lived in the northland 22 years, of which 12 have been spent in the Forest Service. His district includes thousands of small islands and is the scene of an important fishing industry. Mr. Peterson was food administrator for Alaska during the war and feels strongly the need of fish conservation there. In describing the ruthless waste which takes place at some seasons and under certain conditions he cites instances where from thousands of salmon scooped up in a catch only the "kings" have been saved and all the inferior fish killed by rough handling are thrown back into the water dead. Canners give shortage of labor as their explanation of the wastefulness. They say they can get only a limited number of salmon cleaned before spoiling and consequently strive to have as many kings as possible. In Mr. Peterson's district in a single summer 448 whales were captured, averaging 55 tons in weight and yielding about 25 barrels of oil each.

District 6 - North Pacific District (Continued)

Accompanying plans for the road from Grants Pass to the Oregon Caves, Josephine County, are plans for the safety of visitors at the caves and protection of the caves from vandalism. Gates at the entrances may be constructed. These caverns are supposed by some to cross the Siskiyou Mountains into California, so that to get lost in them might be very serious. The icicle-like incrustations, easily broken off, are temptingly beautiful and must be safeguarded.

Commissioner Mann, of the Portland Water Bureau, credits Supervisor Sherrard, of the Oregon Forest, with praiseworthy activity in getting under the protection of the Forest Service lands that could not be logged off without injury to the Portland water system. By June first it is hoped that united municipal and federal effort will have made it impossible for a combination of private owners to log off large tracts of land within the Bull Run reserve. Deals are pending, which, within three months, should place in public ownership the 5,400 acres on the reserve that until recently have been in private ownership.

District 7 - Eastern District

An unusual request was recently received by the District Forester from the executor for the estate of L. S. Tainter. Mr. Tainter was formerly president and general manager of the Publishers Paper Company, Boston, Massachusetts, from whom the Government has purchased a considerable amount of land in the White Mountain National Forest. Mr. Tainter died January 25 and his will was found to contain the following paragraph:

"I direct that my body be cremated; and it is my desire, if the consent of the department officials can be obtained, that the ashes be enclosed in an indestructible container of copper or other appropriate material, and securely deposited in a suitable excavation hollowed out of the solid rock upon the ledges on Whiteface Mountain which are situated, according to my present recollection, upon Lot 49, in Waterville, New Hampshire, said lot, together with other lands formerly owned by the Publishers Paper Company, having been acquired by the United States of America, through its Forest Service, as a part of the White Mountain Forest Reserve. If this disposition of my ashes cannot be made, then I desire that they be scattered to the winds at some spot in the White Mountains. I request my friend Froome T. Watson to carry these provisions into effect, at the expense of my Estate."

The executor of the estate applied to the District Forester for permission to carry out Mr. Tainter's wishes. Arrangements have been made to issue a permit as soon as a place is selected by the executor.

National Forest Examiner W. F. Hill has returned to the Florida National Forest for the purpose of furthering the land exchange work which is there being carried on. On account of the many vexing difficulties which he is encountering, Mr. Hill has come to the opinion that as many things may go wrong with an exchange case as with a last season's Ford.

Assistant Forester, H. O. Stabler spent three days recently on the Florida National Forest. In that time he was able to make an inspection of the Crestview-Camp Walton Federal Aid Road Project, which is nearing completion. Of the total distance of 29 miles, but a few hundred yards remain to be surfaced. The last day of Mr. Stabler's visit to the Forest was enlivened by some very good trout fishing at Camp Pinchot. He caught five salt water trout which weighed 11 pounds.

Mr. H. O. Stabler, and L. L. Bishop recently made a four days trip over the Alabama Forest. The total acreage of the Alabama is nearing the 100,000 mark, and it is expected that within the near future ~~common-to-the-other-new-Forests-of-the-East~~ practically all of the different activities common to the other new Forests of the East will be carried on there.

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

March 29, 1920.

Senate Committee Restores $240 Bonus

The Senate committee has reported out the Legislative, Executive, and Judicial Bill in substantially the same form as it was last year, which means that the $240 bonus for Government employees is included. Although the item was omitted by the House, the feeling is that there is little doubt of its final adoption. This comes as good news to everybody, for while it has been generally thought that the bonus would be continued, the action of the House caused some uneasiness.

"Light Burners" Coming into Camp

Doubtless members of the Forest Service generally have seen the articles which appeared in Sunset Magazine for March and April on the subject of light burning in California. The old controversy on light burning, which was acute in 1910 and subsequent years in California but died down during the war because the lumbermen who believed in it finally agreed to stop their agitation in view of the fact that a campaign against fire of all kinds was on as a war measure, was reopened last summer by Joseph A. Kitts, through various articles in lumber journals and elsewhere. The Land Department of the Southern Pacific Railroad took the matter up last November, by publishing a pamphlet written by Mr. Kitts. The Southern Pacific, after vainly trying to get the Forest Service to agree to join with the railroad in a large-scale test of Mr. Kitts' plan on railroad and National Forest lands combined, made arrangements for such a trial on its own account, putting Mr. Kitts in charge.

Stewart Edward White, who several years ago took the Service to task in published articles for not having done more to stop insect infestations, especially in California, where he has large timber interests, joined in the new campaign by preparing and offering to Sunset the article which was finally published in the March issue of the magazine.

In this article the most prominent place was given to the claim advanced by the author, on the basis of personal observations, that light fires were the true remedy to use against the Dendroctonus. The editor of Sunset Magazine, Mr. Walter V. Woehlke, is personally a strong believer in the Forest Service, and accepted the article only on condition that it should be followed by one from the Forester. Mr. White was then to be given opportunity for a rejoinder, with the understanding that the Forester was to reply again to this; and in the fifth issue Mr. Woehlke would sum up and present his own conclusions.

The Southern Pacific action forced the Forest Service to seek all the publicity possible, in self-defense. It was felt that unless public sentiment could be rallied to a vigorous support of fire prevention and suppression, the task of protecting the National Forests not only in District 5 but in parts of District 6 and to some extent in other Districts, would be made much more difficult. The lumber interests in California were generally on the other side, and a great deal of questioning and confusion was developing in the public mind.

Stewart Edward White typified the attitude of the lumbermen in his refusal to accept as valid the data and conclusions of the Service, on the ground that we were not open-minded but had prejudged the case and simply brought forward what would support our own side. A meeting of the California chapter of the Society of American Foresters was held, to which were invited various representatives of the lumbermen, and at which papers were read by Mr. S. B. Show and others. In February a point was reached at which it was recognized that there was a deadlock. Lumbermen began to feel that the public discussion was not getting anywhere, since each side held its own ground, the lumbermen refusing to accept our data, while the Service refused to be a party to extensive experimental application of measures which we were already satisfied had been sufficiently proved to be destructive.

Through Mr. Redington's skillful handling of the situation, a new and very promising turn was given the whole matter. A meeting was held of representatives of all parties interested, including the lumbermen, the State Forester's office, the University of California, and the Forest Service. It was agreed that propaganda on light burning had better be brought to an end, and that attention should be given instead to the subject of fire damage. The lumbermen were willing that our data should be submitted and reviewed, for a dispassionate judgment as to what these data established - a proposal which the Forest Service on its part welcomed. A committee was formed, with Mr. Redington representing the Service on it, to make plans for and carry forward the further procedure, including the preparation of plans for obtaining further data where these were found to be required. The lumbermen were perfectly willing to recognize that safeguarding reproduction was an essential. It was decided to employ a technical forester to take charge of the matter, under the committee, and Mr. W. C. Hodge, who was formerly in the District office, was selected.

On the whole, it is believed that a very satisfattory outcome is in prospect, which will make the light burning controversy in California a thing of the past.

When the March issue of Sunset was ready to go on sale, the management of the magazine advertised Mr. White's article in a somewhat startling manner. In a number of western cities a street car advertisement appeared reading: "The Forest Service will not protect your forests, fire will, says Stewart Edward White in a smashing article," etc. District 5 immediately took the matter up with Mr. Woehlke, who promised, in view of the feeling of the District, to restrict the advertisement and to withdraw it as soon as possible. He also explained that he was planning for much larger advertisement of Colonel Graves' article, which he regarded as an absolutely conclusive answer to the White article. These facts, however, were not known elsewhere, and in consequence telegraphic protests against the advertisement were made both by the Forester and by District 6. There was quite a flurry over this matter for a little while, but explanations shortly cleared the situation satisfactorily to all concerned.

A note will be found in this week's contribution to the Bulletin from District 6, explaining further what happened there.

On receipt of the proofs of Mr. White's rejoinder to the Forester's article which is to appear in the May issue of Sunset, it was the feeling of the Washington office that this rejoinder does not require a reply, particularly in view of the progress being made along the new line.

The End of "Milch"

For fifteen years or more sticklers for the use of English undefiled in bulletins and articles of the Department have hung onto the spelling of the word designating as "Milch" the gentle animal that produces the lacteal fluid. When the early grazing men of the Forest Service first began to write the word they naturally spelled it as they had used it in their western experiences. To them it was M I L K plain and simple. Some of them chafed mightily at the restrictions placed upon their orthography by highbrowed editors who, they felt, knew naught of the lore of the cow camps or the technical language of the farmer boys. To most of the grazing men a cow was a cow and the word cow was applied literally and liberally to all animals of the bovine kind that wore horns and carried some good cowman's brand. A cowman might run steers only, but he was nevertheless to the westerner a cowman - nothing more. To all such a cow that gave milk was perforce a milk-cow. The only place any of them had ever seen the word spelled with a "ch" was in their youthful days when they delved deep into the interesting experiences of the Swiss Family Robinson, or labored through some Sunday School lesson brought to their unwilling gaze by a puritanical system of home government. To be sure Robinson Crusoe had in his well-known menagerie what he chose to call "Milch Goats" but as Mr. Perlmutter aptly remarks "That is again someting else Abe."

Thus it was that the official spelling of this simple word was anathema to the grazing men of the Forest Service who foolishly followed in the footsteps of their forbears and "hung and rattled" over it with the Intellectuals only to find their manuscripts corrected and their ideals of early childhood smashed to tiny bits.

Then again there was the economical side of the proposition - Why use five letters when four would convey to a waiting world the thought they were trying to present? Why use the sibilant consonant when plain ordinary K would so fully answer every possible need?

The End of "Milch"(Continued)

"Why not 'Milch' weed for the B.P.I?" did these roughnecks from the western ranges protest hotly. "It's just like a cow, it gives milk even if it is a weed!"

But they got nowhere with this line of reasoning. The advocates of simplified spelling were [illegible] referred to the dictionaries where they found the word "milch" was defined as "applied only to animals and chiefly to cows." Later on, about 1910, the new editions of the dictionaries contained some additional information in the definition above referred to, to the effect that the word was "more commonly spelled milk." It has taken ten long, weary years for this change to sink in deep enough to cause relinquishment of the strangle-hold on the "ch."' But now, behold, on February 14, 1920, the Department advises all concerned that "hereafter the word 'milk' is to be used instead of the word 'milch' in all manuscripts, etc."

Oh Milk, where is thy sting? Oh Cow,where is thy victory!

W. C. BARNES.

Walnut Burls from India

The recent arrival in England of a shipment of 244 walnut burls from India was the subject of considerable comment in the English lumber journals. They are said to be the first Indian walnut burls that have ever reached England. They came from a remote interior province, and the transportation problem was difficult. The valuable blocks of wood were carried twenty miles on the backs of natives, and then ninety miles farther on the backs of camels before rail and water communciation with the outer world was reached.

The wood will be sliced in thin veneers in England and will be worked into furniture, interior house finish, and musical instruments. It is intimated that some of this fine wood may seek a market in the United States where highly figured veneers command the best prices.

The exact species of the walnut is not stated in the published accounts. Different kinds of trees pass in India by the name of walnut, some of which are no more like locust than walnut; but true walnut grows in parts of northern India, and if it is not the genuine Circassian walnut, it bears close resemblance to it. Apparently this is the wood which has just reached England. The figure consists of shades of brown, black, and yellow.

Prices at which these burls are held are not stated; but Circassian wood of a similar kind, when on the market a quarter of a centmry ago, in London and Paris, commanded a price of $300 a ton.
(Hardwood Record)

How Teak is Logged in Burma

Teak is the principal--almost the only--commercial timber of Burma. There are no teak forests comparable to the pine, maple, or other forests of the United States. Teak usually grows among other timber, and this scattering is accentuated by the fact that the reserves belong to the Government and, three or four years in advance of the time of cutting, the Forestry Department girdles such trees as it wishes to have cut at that time.

This timber is cut into convenient lengths and hauled to the river or to a depot, where it is stored to be put into the river at a convenient time. The hauling is done chiefly by elephants, but also by buffaloes. One of the leading firms has employed tractors with considerable success on ground too soft for elephants. Chain and wire rope are used and portable donkey engines might be used in places where conditions make their use advantageous. (Consular Report)

Wooden Houses in Great Britain

Although much has appeared in the British press during the past few months in favor of the construction of large numbers of wooden buildings as a means of relieving the housing shortage, and although a considerable number of such houses may eventually be built here, in the opinion of experienced builders they will never become popular, for the reason that they are not suitable to the English climate. Furthermore, capitalists who have land to build upon are not in favor of putting up cheap and short-lived structures; they prefer to erect substantial buildings which will last for at least a hundred years. A type of wooden house, made to architects' plans and built from the ground up by experienc carpenters with walls plastered and backplastered, and of the type which can be kept warm by furnace, steam, or hot-water heating when the thermometer is below zero, might be popularized here if it could be built cheaper or quicker than a house of brick or stone after the British pattern; but this, according to the best practical authorities in the building trade in London, can not be done at present.

In the first place, the erection and finishing of a modern wooden house, after the best American pattern, calls for the labor of a considerable number of first-class carpenters. Now, at the present time, Great Britain is woefully short of carpenters, as over 200,000 of those who were available in 1914 were either killed or permanently disabled during the war. This shortage of carpenters can not be made good in the near future, inasmuch as it takes a number of years to train a man into becoming a first-class carpenter. (Consular Report)

Suitability of Various Hickories for Vehicle Manufacture

The principal species of hickory are divided botanically into two groups, - true hickories and pecan hickories. True hickories include shellbark, shagbark, mockernut, and pignut or black hickories. Pecans include bitternut, nutmeg, pecan, and water hickories.

The chief difference between true and pecan hickory, as shown by tests at the Forest Products Laboratory, is in toughness or shock-resisting ability. This is the property which is so valuable in wood handles and vehicle parts. In this property true hickories are far superior to the pecans.

The strength properties of pecan are somewhat in excess of those of oak or maple, and for such articles as handles and buggy spokes, carefully selected pecan is probably to be preferred to either of these two woods. In heavy wagon parts, such as axles, spokes, and felloes, maple and oak are reputed to stay in place better than hickory. Except in case of extreme shortage of maple, true hickory, and oak, it would probably be inexpedient to use pecan hickory for these heavy parts.

The sapwood or white wood of hickory, which is usually preferred by the trade, is the better wood in young, thrifty trees; but in overmature trees it is inferior to the heartwood. A red color does not necessarily make sound hickory unsuitable for vehicle stock.

A more useful criterion than color is the proportion of summerwood, or nonporous wood, in the annual growth rings. In hickory stock intended for the more exacting uses, the nonporous wood should form at least one-half and preferably three-quarters of the annual ring; and the remaining part should contain very few pores. A further precaution to be observed is that the nonporous part of the annual ring should be hard and flinty.

The best criterion of the strength properties of either true or pecan hickory is the weight of a cubic foot of the dry wood. This weight should not be more than 10 per cent below the average for true hickory, or not less than 45 pounds per cubic foot of oven-dry wood.

Legislation

The Agricultural Bill as passed by the Senate is, in general, quite satisfactory to the Forest Service. The bill as amended by the committee provides for the readjustment in salaries on the statutory roll so as to cut out entirely sixty $900 clerkships and to establish in place thereof 7 positions at $1,800, 7 at $1,600, and 20 at $1,500, making a net reduction in the statutory roll appropriation of $200. The promotions which will follow these changes, in case they are adopted, will benefit about 175 persons in the Service. It is planned to take care of the positions dropped from the statutory roll by the use of miscellaneous funds.

Legislation (Continued)

The Bill raises the limit on buildings, either new construction or as improved, to a maximum of $1,000. The $25,000 appropriation provided in the House Bill for an investigation of the value of grazing on the Forests has been cut out. The sum of $60,000 is provided for fire detection in cooperation with the Army Air Service. An appropriation of $200,000 is made for cooperation with the States under the Weeks Law. It is hoped that the conferees will agree to all of these amendments.

Under provisions of the Kahn Bill which has been passed by Congress, the Secretary of War is authorized and directed to transfer to the Department of Agriculture such motor equipment, road building equipment, and telephone supplies as are no longer required for military purposes. More important still, however, is the specific authorization for the maintenance, repair, or operation of motor-propelled or horse-drawn passenger-carrying vehicles transferred by the War Department under provisions of the act passed February 28, 1919.

It now remains to be seen what property will be declared surplus by the War Department. The specific provision relating to telephone equipment will probably be found of little use because no telephone equipment has been released and the wire used by the War Department is not suitable for Forest Service needs. It is very much to be hoped that some of the road equipment now in the possession of the War Department can be secured for National Forest road projects where it is so badly needed.

At any rate the bill settles the difficulty of running the automobiles already obtained, and we should be thankful for small favors.

Washington Notes

Assistant Forester R. Y. Stuart returned last week from the West where he attended Supervisors' meetings at Denver, San Francisco, and Missoula. At each of these meetings Mr. Stuart says he was impressed with the desire on the part of the field men for technical information on various lines of the work, and feels that more and more we are coming to realize the need of knowing just where we stand. This can doubtless be taken as a pretty reliable indication that we are both catching up with the job and are getting in the position where we can look ahead and make plans instead of being kept busy making the wheels go round.

R. B. Adams, telephone engineer, who has been on detail here, has returned to Missoula. Before leaving Washington Mr. Adams was successful in securing 24 sets of wireless telephone instruments from the Navy. The instruments were furnished without charge, the only condition being that reports should be made to the Navy on the experience which is secured with them. It is expected that they will be used in the Thunder Mountain region, recently added to the Payette and Idaho National Forests, and other inaccessible areas.

Practically everybody in Research is in the field getting dope for the report called for by the Capper Resolution. Hawes, Zon, Frothingham, Mattoon, Cook, and Brush left last week to cover their respective territories. Franklin H. Smith, Wolfe, Eldredge, and Helphenstine expect to get away about March 29. Reynolds, who is in New York, is also gathering some statistics, and Coert DuBois, now in the Consular Service at Paris, has been asked to furnish some information. Telegraphic progress reports from the Districts are keeping the office in close touch with the work, and the whole organization is tying into the job in good shape.

Acquisition

How some of the many real estate booms work out was brought to light in the following letter which was received from a man living in a small Pennsylvania town:

Acquisition (Continued)

"I have a deed to some real estate in the county of Clay and State of North Carolina, known as several lots in Block #36 of Division (A) in Golden City as laid out by the Southern Land and Colonization Company. Peter Eichels, President and Trustee of the Southern Land and Colonization Company sold us the above real estate and said the title was clear and free and unencumbered and would be a good investment for us when we would want to improve it for a home. My deed is registered in the Office of the Registrar of Deeds for Clay County at Hayesville, North Carolina. The newspapers now say that all that land has been sold to the Government for a 'Reserve.' What shall I do?"

The land in question is located on the top of what is known as Tusquita Bald, about 5,000 feet in altitude and situated on what is known as the Olmsted lands in a remote part of Clay County, North Carolina. The boom was started in 1885 and as the promoters had only a shadowy claim to the title, the prices on building lots were quite reasonable.

The Olmsted lands first came into the possession of the Government in 1869 through the bondsman of a defaulting postmaster. They were held in custody by the Treasury Department until 1912 when by an act of Congress they were transferred to the Department of Agriculture. Outstanding claims to the land were settled by a recent decision of the Supreme Court.

Forest Assistant P. M. Hodgkins stopped over in Washington for a few days enroute from the White Mountains to the Shenandoah Forest.

Forest Examiner S. H. Thompson is in charge of a party examining a tract of 34,000 acres situated on Elliotts Knob in the Shenandoah Forest.

Forest Examiner C. E. Beaumont has been temporarily assigned to the Shenandoah Forest to assist in breaking in the new men who are in the party. Mr. Beaumont will return to the Cherokee as soon as the work on the Shenandoah is well under way.

Messrs. Beaumont and C. L. Perkins were unwilling witnesses to a recent killing on the Cherokee when a man was shot down in his own doorway. This was the first thing of the kind that Mr. Perkins had seen and he hopes it will be the last.

Forest Products Laboratory Notes

"In its ten years of history the laboratory has built mightily for the good of the lumber and wood-using industries. If we have not properly appreciated it here our foreign neighbors abroad and to the north have, for the Madison laboratory is set up as a model and a wonder worker the world over."
Hardwood Record - Feb. 25, 1920.

During the past two months about 500 pounds of stock food have been prepared by hydrolyzing western white pine, leaching the sugars thus formed, and evaporating the liquor to a thick syrup after the sulphuric acid had been neutralized with lime. This syrup was then mixed with the residue consisting of hydrolyzed dust.

This stock food has now been turned over to the Agricultural Department of the University of Wisconsin and a series of feeding experiments has been started upon a herd of cattle. Used half and half with a regular mixed feed, it seems to be palatable, and no difficulty is anticipated in feeding it.

If the cows get to the point where they like Doc Sherrard's sawdust it may be necessary to creosote the posts in the pasture fence in order to prevent them from being eaten up.

Subscriptions to the Near East Relief Fund totalling $168, have been made by 70 members of the Laboratory. This is in addition to the amounts subscribed by members through other agencies.

The laboratory extends a hearty greeting to its two new members - Arthur T. Upson and Arthur M.Cook - both from the Forest Service at Denver, Colorado.

Forest Products Laboratory Notes (Continued)

The pulp mill at Mechanicsville, N. Y., in cooperation with the laboratory, is studying the problems connected with the recovery of waste sulphite liquor and the manufacture of ethyl alcohol. This is the only pulp mill in the United States that is manufacturing ethyl alcohol. The recovery of sulphite liquor is from 95,000 to 100,000 gallons per day, from which 900 gallons of alcohol is obtained. This alcohol sells at about 75 cents per gallon.

The Madison section of the Society of American Foresters is enjoying a rapid growth. The section was organized early in the winter, Ovid M. Butler being elected Chairman and Donald Brewster, Secretary and Treasurer. The membership of the section already numbers 64 and the meetings are largely attended. The first meeting was held in December at which Mr. Butler gave a talk on the need of closer coordination between the work of the Forest Products Laboratory and that of the Districts. Following his talk, a Committee was appointed to draw up a plan.

The recent meeting at the University Club was attended by a majority of the technical workers of the laboratory besides several others interested in forestry and forest utilization. The papers by C. P. Winslow, Director of the Laboratory, and C. N. Billings, in charge of Products in District 1, brought out from two different angles the growing importance of research in forest products, and called forth a lively discussion. Dr. J. V. Hofmann, in charge of the Wind River Forest Experiment Station of District 6, showed the direct and vital connection between the growing of forests and their utilization, and pointed out that the most effective cooperation could be built up if the specialists in products research would do all they could to increase the usefulness of the trees most easily grown and the specialists in forest production would do all they could to grow the most useful and valuable trees.

C. R. Rogers, Director of Forest Studies in America to the Government of India was a recent visitor at the laboratory. Mr. Rogers' special duties are to organize the best possible course of practical logging in America for British civil or mechanical engineers.

Another caller was Capt. W. R. Birke of Australia. Captain Birke has been with an artillery regiment in Europe for the past five years but is normally with the Department of Agriculture at Sydney, New South Wales.

The Technical Notes of the Forest Products Laboratory are beginning to rival the Saturday Evening Post in popularity. Have you seen the March issue?

District 1 - Northern District

A review of the grazing reports for the past season shows that as regards conditions on the range and in the live stock industry generally the season was the most severe that has been experienced since the Forests were placed under administration. Watering places dried up and caused a further curtailment of the already meager amount of available forage. Outside range was completely eaten off long before that inside the Forests. Coming on top of the war emergency measures of the two previous seasons during which additional stock was authorized even in places where the range was already well stocked, the condition was all the more srious. It has consequently been necessary in a few cases to recommend that the number of permitted stock be reduced. For the most part, however, there seems to be justification for a continuance of the close utilization of the last three years and even for occasional increases on the assumption that the Forest ranges are in better condition than the outside range and the recurrence of abnormally dry seasons does not form a desirable basis on which to make reductions.

Future developments may justify this opinion, but there is a question as to whether such a course is not "skating on thin ice." The exigencies of the fire season last summer reduced range supervision to a minimum. Summarizing these conditions gives rise to the following questions: Has the range been seriously damaged and has a break in the range improvement program occurred as a result of heavy use? These questions are definitely up to field men for reply. They must find the right answer and be in position to take such action as may prevent serious range deterioration.

District 1 - Northern District (Continued)

Although some of us have been inclined to joke about the Custer as the "treeless Forest," it is well not to forget that from the standpoint of timber sale business the Custer is at present handling a larger volume of sales than several of the heavily timbered western Montana and Idaho Forests. In the fiscal year 1919, for example, there were 493 sales, with a total cut of 1,829,000 feet, and timber sale receipts to the amount of $3,645. Most of these sales, to be sure, were made under Regulation S-22. On a purely commercial basis the timber would have brought in the neighborhood of $10,000. The homesteaders in the vicinity of Custer benefited to the tune of $6,355 on stumpage alone.

Forest Ranger Granville, J. Gordon of the Cabinet Forest resigned from the Service on February 29 to take active charge of his farm near Noxon, Montana. Mr. Gordon entered the Forest Service in 1907 and was one of the first rangers to be employed on the Cabinet. All of us who had the good fortune to stop at the Bull River Ranger Station will remember the unstinting hospitality which was always extended by Mr. and Mrs. Gordon.

Ernest E. Hubert, who, for the past four or five years, has been associated with Dr. Weir in the work of Forest Pathology has announced his transfer to the Madison Laboratory on March 1. Mr. Hubert will continue his work in Forest Pathology, giving particular attention to the strength and other qualities of timber.

W. C. Lowdermilk of the office of Research is absent on a three weeks' trip on Canuck creek. Mr. Lowdermilk is working out a marking system for the Pend Oreille Forest in connection with a contemplated sale of 60,000,000 feet of timber.

Former Supervisor F. J. Forsythe who is now associated with the Dalkena Lumber Company of Newport, Washington, was a District Office visitor this week.

The Bitterroot office is in receipt of a letter form A. J. Devan from March Field, Riverside, California, announcing that he has made his first flight, and that he is scheduled to fly every other day during his course. So enthusiastic is Mr. Devan over his work that he declares his intention of "bumming" as many additional trips as he can work in.

District 2 - Rocky Mountain District

"More than two million people use the National Forests for recreation each year," is a time-honored phrase which has been used by the Service in describing the recreational possibilities of the Forests for lo, these many years. It is probably based on figures which were compiled when the Grand Canyon was still a National Forest and had by far the largest number of visitors. The time has come, however, when we must revise our figures. In this district alone there were last year a total of 1,223,544 recreation visitors on the National Forests. Of this number 22,548 persons from 48 States and 24 foreign countries registered in the books provided for that purpose by the Forest Service. It is estimated that the recreation visitors spent a total of 1,850,625 "recreation man-days" on the Forests.

If District 2 can account for a million and a quarter visitors, it goes almost without saying that the total for all the Districts must run up well beyond five million.

Assistant District Forester F. H. Morrell and National Forest Examiner John McLaren attended the law enforcement conference held in San Francisco.

Forest Supervisor E. W. Tinker of the Arapaho National Forest has been transferred to the position of Forest Supervisor of the Bighorn National Forest.

Mr. Tinker with his wife and baby were held up for six days on the Moffat R.R. between Tabernash and the top of the Continental Divide on account of snow conditions, and they suffered considerable inconvenience on account of the shortage of fuel and food.

District 2 - Rocky Mountain District (Continued)

Telephone Engineer H. R. Kylie has returned from Durango where he conducted a ten days course in special telephone work. The School Board at Durango loaned the men the use of the physics laboratory at the high school which made plenty of equipment available. Mr. Kylie reports that the men were very enthusiastic, worked hard and received good ratings.

District Engineer Fred D. Mendenhall and Assistant District Engineer J. L. Brownlee have completed the detailed inspection of the Bennett Creek road project on the Colorado Forest. A 3-span bridge is being built now in order that the piers may be constructed before the spring flood of the Poudre River comes. Work is progressing very satisfactorily on this bridge, excavation for the foundations being practically completed. Superintendent Brewster is in charge of the work.

Forest Supervisor Ress Phillips of the Bighorn National Forest has been transferred to the position of Forest Supervisor on the Pike National Forest.

Harold L. Borden, Forest Examiner on the Leadville National Forest, has been promoted to the position of Forest Supervisor on that Forest.

R. E. Clark, Forest Supervisor of the Leadville National Forest, has been transferred to the position of Forest Supervisor of the Rio Grande National Forest.

Alva L. Richey, Deputy Forest Supervisor of the Routt National Forest has been promoted to the position of Forest Supervisor of the Arapaho National Forest.

District 3 - Southwestern District

A sale of 2,400 M feet of Western Yellow Pine to the Saginaw and Manistee Lumber Company was made by the Tusayan Forest on March 12. This timber brought $4.00 per M. Logging is to be completed by June 30, 1920.

I am glad to add another testimonial in favor of the Government Employees Mutual Relief Association. The especial reason is the receipt of a check in reimbursement for medical attention. It is hard to face the H. C. L. these days, so let us not add the task of facing our families without the protection of this reasonable insurance.

Llew J. Putsch.

Mr. Gill and Dr. Long are drawing the landscaping and planting plan for the new Albuquerque park on Fourth Street.

Last week, Judge Hays, of Phoenix, caught a 42-inch Colorado Salmon out of Roosevelt Lake on the Tonto Forest which weighed a little better than 32 pounds. This is, according to records, the largest fish caught here. The Colorado Salmon is a native fish, presumably established in the waters of Salt River from the Colorado, prior to the construction of the Roosevelt Dam. It is said that this monstrous fish had swallowed a three-pound perch just before he took the Tango.

Grazing receipts in February have pulled the District out of the deficiency mire of last month, at which time this District was the only one showing a shortage of receipts as compared to the July 1-January 31 period of last year. This month's statement from the Washington Office of accounts indicates an increase of $390,000.00 in receipts for the whole Service compared to last year while District 3 individually is $40,000.00 ahead of the game.

Drives and contributions for "Worthy Causes" seem to be supplanting the brass rail as the great indoor American sport. If anyone can tell us of an unappropriated day or week for the years ahead, please do so - we'd like to get in a little personal drive for the benefit of our worthy family purse to strengthen it for future drives. The District Office gets it especially heavy as there is more opportunity to swat us in bunches than when the drivee is isolated or in a remote location. On February 25 the Red Cross made a descent and the office force handed over $80.00 to the cause. A local Y. W. C. A. drive on March 3 netted $92.50.

District 3 - Southwestern District (Continued)

Warning to those who handle improvement funds (Luke 14: 28-30):

"Which of you, intending to build a tower (or a house) sitteth not down first and counteth the cost, whether he have sufficient to finish it? Lest haply, after he hath laid the foundation, and is not able to finish it, all that behold it begin to mock him, saying, 'This man began to build and was not able to finish,'"

It is very unlikely that we will indulge in hardwood flooring for ranger stations. The latest quotation in Albuquerque on shipments due is $225 per M. The District Office has a sample board of maple flooring. Anyone desiring fragments for mounting in finger rings or scarf pins, please apply pronto.

Apparently the public is waking up to the folly of allowing the Government Service to disintegrate because of insufficient salaries. The Philadelphia Bourse, an organization comprised of over 2500 business men, firms, and corporations, has sent a strong petition to Congress in favor of the salary bonus. Here in the Southwest, the New Mexico Wool Growers' Association, the Cattle Growers' Association, the Hallack & Howard Lumber Co., the Flagstaff Lumber Co., and various other influential organizations are taking a lead in the fight for better salaries. They are placing the thing squarely on the ground of securing efficient public service. Here is a resolution passed by the New Mexico Wool Growers' Association at its recent annual convention:

"WHEREAS, The wool growing industry of New Mexico is dependent in a large measure upon the proper and efficient administration of the grazing lands within the National Forests, and upon the proper functioning of other related branches of the Federal Field Service of the Department of Agriculture, and

"WHEREAS, The efficiency of the United States Forest Service and these other branches of the Federal Field Service is being impaired, to the detriment of our industry, by the inadequate salaries paid their employees, and is still further endangered by the movement, on foot in Congress to discontinue the two hundred and forty dollar bonus now being paid the lower salaried Federal Employees and

"WHEREAS, The present salaries are wholly insufficient and not commensurate with the increased high cost of living which policy we condemn as niggardly and calculated to cause deterioration in the Federal Service, therefore be it

"RESOLVED, That the New Mexico Wool Growers' Association protest against the discontinuance of the bonus which has previously been carried in the Executive Legislative and Judicial bill, and request our representative in Congress to see that this bonus is continued, increased, and to secure the enactment of such further permanent legislation as is needed to provide adequate compensation for the employees of these services so that they will be justified in remaining in their present positions and that other suitable men will be encouraged to enter these Services in the future."

District 4 - Intermountain District

Why is a Ranger?

Oh, a Ranger is in danger of congestion of the brain! If he tries to keep all posted up on every latest plan. He is but one lone mortal, at the crossing of the ways of a thousand different theories, of a thousand different days. He must be an expert woodsman, and a guide and trapper too; and must know in all emergencies the proper thing to do;-how to fix a motor, mend a leg or rope a steer, play a tune on a typewriter, please the diplomatic ear; also how to run a survey, find a corner where it ain't, and, in extra stressful moments, how to exercise restraint. He must be a sawmill expert, cowboy and lumberjack, and an information bureau brimfull of statistic fact. And he must be trained in botany and know every growing plant - so's to educate the cattle what they can eat and what they can't. He must know the birds and animals, the insects and the fish, their every need and comfort and their every wile and wish, including why a woodchuck would and why a dodo don't, as well as why a whippoorwill and why a coyote won't. All professions and sciences and every common trade is the fund of useful knowledge for which he's so princely paid. And still there's something to it all that holds the Ranger on when he tells himself and all his friends that he would fain be gone.

---Ranger W. A. Estep,
Teton National Forest.

District 4 - Intermountain District (Continued)

The lion killed within the Dixie Forest on January 30 was evidently suckling young. Isaac Dazarth of Parowan being confident of this fact made a trip into the same locality February 20 looking for the young. That he was very successful in his endeavor is evidenced by the fact that he found and killed three young lions about five or six months old. He states that there are signs of more old lions in that locality.

Supervisor Grandjean and his rangers have just completed a census of the game animals on the Boise Forest. It is their judgment that the number of deer is now in excess of 5,000 head and the number of elk in excess of 500 head. They take a great deal of pride in the fact that practically every man who went huntin deer on the Boise Forest last year secured the legal limit. During the winter Rangers Rafferty and Selby have spent part of their time in trapping and poisoning predatory animals on the Game Reserve, succeeding in killing about 75 coyotes. As a result of this the deer have come down much lower in the foothills and the loss due to predatory animals has been considerably reduced.

Ernest Winkler, Grazing Inspector, has returned from Wyoming where he attended a meeting of the Lincoln County Woolgrowers Association on the Wyoming Forest. At this meeting about 52 woolgrowers were present, all contending for use of an addition to the Wyoming Forest, involving 78,000 acres, because of prior use of the range, and alleging that they had grazed on this small unit during the summer 80,000 head of sheep besides having crossed the area with permitted sheep going to the old Wyoming, involving 114,000 head. This area evidently has some carrying capacity. From Cokeville, Mr. Winkler went to Opal, Wyoming, intending to make a trip to Green River to attend meetings held by the various associations on the Wyoming and Bridger Forests. Snow and road conditions were such, however, that it was not possible to make the trip. It is contemplated that meetings with the Green River Cattlement will be held within the next month. Mr. Winkler spent a day and a half in the Caribou office at Montpelier on his way back to Ogden.

Supervisor McCain in asking for an increased allotment for the maintenance of his Government Ford truck has included among his needs and desires the following parts: "A new radiator, four new spindles, a general overhauling of the engine, a new top, new springs and a speedometer." He has made the following repairs with his Supplies and Equipment money, - "four new wheels, two new windshield glasses, four new casings, new seats, new stearing gear shaft, new bfeaks, and other miscellaneous minor repairs and parts."

A little of the history of this unusual Ford would be fitting here and would throw considerable light on the subject. "Lands" first owned it, and after a year or so of constant and hard usage, decided it was no longer of value. They then gave it to McCain for use on the Teton. After they presented him with it they had the unlimited audacity to ask him for $200 toward a new Ford for their use. Mr. McCain was the goat, but he seems to be making the best of it. Mr. Simpson remarked today that it looked as though about all there was to that Ford was a "crank, a gasoline tank, and a reputation."

Ranger Butler on the Humboldt seems to have had another experience which might have been a disaster, but wasn't. The scene was laid in a blinding snowstorm or blizzard, and our hero was making his way to his station. He arrived at a ranch where there was a lone widow and two kids. The ranger made himself useful and took care of the kids while the widow prepared a meal for him. While they were eating, she sighed deeply, and said that she was tired of the lonely life and longed for a husband. Forgetting chivalry and remembering that this is leap year, Ranger Butler bolted for the door. But, - the widow went on to say that she intended returning to her former Husband. At this, Mr. Butler returned to the table and finished his meal with a sense of relief.

District 5 - California District

The following missive is said to have been received by one of the rangers of District 5:

"Kind and respected Cir:

I seen in a paper that a man names J______S______was atacted and et up by a bare whose cubs he was trying to git when the she bare comes up and stopt him by eatin him up in the mountain near your town. What i want to know is did it kill him or was he partly et up and is he from this place and all about the bare. i don't know but what he is a distant husband of mine. My first husband was of that name and i supposed he was killed in the war but the name of the man the bare et being the same i thought it might be him after all i ought to know if he wasn't killed either in the war or by the bare for, i have been married twice since and their ought to be divorce papers got out by him or me if the bare did not et him up. If it is him you will know it by him having six toes on the left foot. He also sings base an has a spread eagle tattoed on his front chest and an ankor on his right arm which you will know him if the bare did not eat up those parts of him. if alive don't tell him i am married to J________W________for he never liked J___: Mebbe you had better let on as if i am ded but find out all you can about him without him knowing anything what it is for. That is if the bare did not et him all up. If it did I don't see you can do anything and you needn't take no trouble. My respecks to your family any please ancer back. P. S.- Was the bare killed? Also was he married again and did he leave any property worth me laying claims to?"

Dr. J. S. Boyce, Assistant Pathologist in Dr. Meinecke's office, has been transferred to Portland to take charge of Forest pathological work in District 6 with the title of Pathologist and a substantial promotion. Boyce received his training in forestry at the University of Nebraska. He began his career as Forest Assistant in District 3 at the Fort Valley Experiment Station. In November, 1912, he was appointed Scientific Assistant in the Office of Forest Pathology in the District Office, San Francisco. He has been in the District for seven and a half years, interrupted only by one years study at Stanford where he took his Doctor's degree, and by his war service in which he made an excellent record.

District 5 is losing a good man but District 6 gains one. Good luck, John!

Hans Jepsen who has been holding down the Clerk job during the past several months on the Mono, pending Civil Service eligibles, has the honor of having passed the Civil Service examination with the highest rating in the District.

Assistant Entomologist J. M. Miller, who is to have charge of the Insect Control work on the Sierra called at the District Office en route to his new location. Mr. Miller expects to make his headquarters at some point on the San Joaquin Insect Control Project for much of the time during the next few years.

B. C. Phelps of the California Forests reports that the heavy wind at Thanksgiving tore all the shutters from the Goat Mountain lookout house, blew out all the windows, carried away the steps leading up the tower to the house and even tore the lookout table inside the house loose from the platform to which it was fastened. Last summer when No. 13 was given to this lookout point for the purpose of enabling the observers on airplane fire patrol to identify it, the wind blew out three windows and Kelpie's dog deserted him, and Phelps made dire predictions at that time if this number were allowed to remain there.

Fresno County in the Sierra Forest has made available $700.00 for the development of Public Camp Grounds in Fresno County and within the Forest. Next!

District 6 - Northern Pacific District

An advertisement posted in Seattle street cars to increase the circulation of "Sunset" magazine contained the following words:- "'Your forests are in danger. The Forest Service won't save them, but fire will,' says Stewart Edward White, in a smashing article." Forest officers who saw them felt that these words were sure to be misunderstood in Seattle, where forests mean the dense stands of fir that surround Puget Sound. Stewart Edward White has never advocated burning such forests, not even to exterminate tree-killing insects; although the sentences, so misleading when separated from their context, belong in an article which recommends surface burning in California yellow pine to eradicate insects. The "ad" had a different meaning in Seattle from what it might have had in San Francisco. Local Forest officers, fearing that it would have an influence toward incendiarism and remembering a city ordinance against objectionable advertisements appearing in street cars, complained to the mayor, who fully agreed with them that its effect would be to invite practical opposition to the Forest Service policy of saving the Forests from fire. The removal of the signs was requested and the request granted, no legal action whatever being asked for or taken.

"Save the wildflowers!" is a new cry in the campaign for protection of the forests from fire. This minor appeal goes straight to the hearts of many people who otherwise would not be particularly interested in forest protection. The new cry was started by nature lovers outside the Forest Service; and it is believed that it may result in practical value, if properly handled.

A cooperative agreement has been consummated with the Washington State Fish and Game Commission by which Forest officers will act as game wardens and assist in transporting and rearing trout fry within the National Forests and the Commission will aid in preventing and controlling fires.

The Oregon Journal, in an editorial article headed "Words Don't Reforest," says that in forestry affairs the United States is like a man who theorizes on fire prevention while his house is burning down.

A girl student from Oregon Agricultural College, where she specializes in livestock subjects, took the recent Civil Service examination held in this District for the position of Grazing Examiner. Lack of actual range experience may disqualify her for the place.

One of the first forest fires of the season burned for three days early in March in a draw of the Columbia Gorge, on the Washington side of the river, adjacent to but outside of the Columbia Forest. The fire was finally extinguished by rain which accompanied an electric storm. This storm is said to have been one of the earliest ever known in the region.

Because of an early spring, shipment of young trees from Wind River and Page Creek nurseries to planting areas reached its peak about the middle of March, or two weeks sooner than usual. More than a million trees from Wind River, mainly Douglas fir, will be replanted on burns and other denuded areas, including 288 acres on Breitenbush watershed, Santiam Forest, where noble fir, silver fir, and western white pine are to be interspersed with Douglas fir. The Page Creek Nursery has furnished 40,000 yellow pine seedlings to the Siskiyou Forest, where they will be planted on the Rustler Peak area. In all more than 1,500 acres of burned-over land in Oregon and Washington will be reforested.

A considerable amount of information regarding the carrier pigeons in use on the Cascade Forest was furnished by Supervisor Macduff during his recent stay in the Portland office. The daily trials to prepare the birds for duty during the fire season have begun. This training begins when the pigeons are nine weeks old and teaches them when liberated to fly high, circle, and return at once, either to the loft from which liberated or to the one that they formerly inhabited.

Movable lofts are an important factor in the training, and the loft and pigeons must be left several days in each place to which the birds are to return.

Ranger stations are the logical headquarters for the birds, but the rangers do not have the necessary time for their care and training. The pigeons at Eugene are the special care of Mrs. Macduff.

District 6 - Northern Pacific District (Continued)

It is stated that considerable care must be used in selecting birds for training. Those with long narrow bodies and large wattles develop into better fliers than birds with short bodies or small wattles. The specialty of these pigeons is carrying messages that can not be telephoned. Smoke chasers take them in baskets to fires in out of the way places and release one when the need arises. The message is carried in an aluminum tube clipped to the bird's leg. On the other leg the bird wears a metal band marked "U. S. A.," "U. S. N.," or"U.S.F.S.," according to whether the bird was obtained from the Army or Navy, or was acquired by the Forest Service. The pigeons travel from 50 to 75 miles an hour and it is claimed that they are more reliable than the heliograph, telephone, or wireless. Mr. Macduff cites an instance in which one of the pigeons saved the Service $75 by carrying a message to an isolated camp which could not have been reached otherwise in time, that 25 fire fighters at $5.00 a day were no longer needed.

District 7 - Eastern District

A plan of cooperation between the Forest Service and the U. S. Marine Corps, which offers considerable possibilities, was discussed by District Forester Reed with the officers of the Marine corps training station at Quantico, Va., on March 24. In connection with the plan of vocational training which has been put into effect in the Marine corps, a class in forestry has been established under the charge of Lt. Aron of California. The Marine corps has about 5,000 acres in its reservation, much of which is timbered and which lends itself admirably to the practice of forestry. The plan as outlined looks to the development of the timber resources of the tract by the class in forestry, with the assistance perhaps of members of District 7 and of the Washington office.

A particularly important point is the possibility of establishing in this class a training school for rangers for the eastern Forests, and may include also the assignment of members of the class to certain of the eastern Forests for field work. These assignments, it is hoped, can be made during the fire season when the presence of the marines on the Forests will be of great assistance in the protective scheme, and also will give the men valuable training under the actual conditions they will meet in the woods.

Gen. Lejune, the commanding officer, and Col. Harllee, in charge of vocational training, as well as Lt. Aron, are much interested in the forestry course and expressed themselves as being willing and anxious to do everything possible to make it a thorough success. Definite plans have not been made and the whole matter is yet to be put in final shape, but it is felt that the plan is one to which a considerable amount of time and thought can be devoted.

The general plan contains almost unlimited possibilities for the Service as a whole. All branches of the military service have adopted vocational training with a view of making the term of enlistment as attractive as possible. There are a large number of army training camps scattered around at various points in the country, particularly in the West, near Forest Service headquarters, where if such classes are formed, cooperation with the military authorities could easily be worked up. The assignment of forestry classes to the National Forests for varying periods during the fire season would unquestionably be of value both to the Service and the men.

I used to fret and worry and loose gobs of perspiration when the forest fires were raging; shedding gloom o'er all creation; and I'd work and sweat and bluster till my nerves were badly wrecked, then I'd cuss the dod-burn fire-bug till I'd loose my self respect. Lots of timber would be ruined, lots of fences would be burned; but the fool who set them burning didn't seem to care a durn'd. But now we have a Forest Service and it's run by Uncle Sam and I can't begin to tell you how supremely glad I am, to see these mountains and these ridges once more clothed in living green and no more the smoke clouds hover o'er the beauteous mountain scene. Yes we have some Supervisors and some Forest Rangers too. They are always on the job and they know just what to do. They keep their Wardens posted and they've built a lot of trails. They face a mighty problem but their courage never fails.

Jas. H. Barbe, Thorn Botton, Va.

(Laurel Jumper).

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

April 5, 1920.

New Salary Schedule Planned

Secretary Meredith has given his consent for the Forest Service to prepare its salary schedules for the 1922 appropriation on the basis of adequate compensation for the class of work performed under present living conditions. It is probable that a complete revision of the salary schedules will be made in order to arrive at the proper figures.

While it is impossible to predict what chance there is of having the revised schedules adopted by Congress, the advantages of being ready to shoot in case an opportunity comes up to bring the matter before Congress are obvious. In the past we have been handicapped by being unable to get before Congress a schedule showing what the Forest Service believes would be fair compensation for its employees. In case an opportune opening should present itself, the matter may be taken up with Congress before the preparation of the estimates for 1922.

The scheme as outlined is a part of the general effort which is being made to secure adequate compensation for the members of the Service, and while hopes of early action by Congress should not be aroused, it is decidedly encouraging to have the Secretary's permission to go ahead with the new schedules.

Dissatisfied Stockmen Take Fling at Service

Considerable misapprehension seems to be prevalent among some of the stockmen regarding the attitude of the Forest Service toward the proposed increase of grazing fees. This matter came up at the hearings before the House Agricultural Committee and there was a strong feeling on the part of some members of the committee that the grazing fees should be materially increased. Both Col. Graves and Mr. Potter took the position that, in view of the understanding with the stockmen when the grazing fees were raised effective in 1919 and on account of the five-year grazing permits which it had issued, it could not properly advocate another increase in the fees until the end of the five-year period which is at the end of the 1923 season. Especially did they emphasize the danger of basing grazing values under the present inflated valuation of all such lands. The fact that the matter had come up before the committee was widely advertised and since many people make little, if any, distinction between Congress and any other branch of the Government, the impression has gotten abroad in some quarters that the Forest Service is in favor of raising the fees. Perhaps there is deliberate misunderstanding by some of those who have other grievances against the Service. At any rate, things are being said and written by some of the stockmen which are entirely at variance with their former friendly attitude.

The latest issue of the "National Woolgrower" contains three articles strongly condemning Forest Service methods of handling grazing lands and advocating that such lands be sold to private parties. This sounds like old times and takes many of us back to the days when the stock interests were among the bitterest opponents of the Service. It is worthy of note, however, that one of the articles is written by a man whose permit has had to be reduced in order to take care of new permittees. All of the articles are probably inspired by the large interests who object to a reduction in the number of stock allowed them. The Forest Service has been looking after the interests of the little man ever since it took charge of the National Forests and, while it regrets the attitude of the larger owners, there is no reason for changing the policy which has held good for the past fifteen years.

An Arizona Sheep Driveway

When it comes to the livestock business they do things on a large scale down in Arizona, a country which in the estimation of the average forest officer unacquainted with the Southwest is often placed on a very low basis as far as its forests and grazing conditions are concerned.

When the Tonto Forest was established the stockmen were in the habit of moving between 200,000 and 300,000 head of sheep from the mountains in the northern part of the State to the Salt River valley during the winter months. They made this pilgrimage in order to winter the sheep on the so-called deserts where, if weather conditions were right, they were enabled to lamb in the latter part of January and during February on what is perhaps the most satisfactory lambing forage known anywhere in the United States, namely, the Alfileria. Here this plant and certain weeds, especially the geranium, after the winter rains begin, reach a luxuriousness and growth almost unbelievable.

In the early days the sheep went back and forth without restrictions of any kind, except those imposed upon them by the irate cattlemen across whose ranges they passed. When they went south in the fall the herds were generally made up of ewes, but when they returned in the spring after lambing it was a two to one proposition- there was practically a lamb for every ewe in the bunch. This unregulated use, of course, could not be allowed to continue when the area was taken under control by the Forest Service. One of the first steps was to establish a sheep driveway leading from a point on the north boundary of the Sitgreaves Forest south of Holbrook, in a southwesterly direction across the Sitgreaves and the Tonto, to the Salt River in the southwest corner of the Tonto Forest. This trail is approximately 131 miles long and in many places as much as four miles wide, but on account of the settlement of the land along the driveway, it is often reduced to about a quarter of a mile for considerable distances. It contains, however, a total of about 96,000 acres of forest land. Just what this means to the Forest Service can readily be grasped when it is realized that on a basis of an average of 38 acres to each cow grazed, this land would carry over 2,500 head of cattle the year round and, at the charge for yearlong permits on the Tonto Forest, would return an income of about $2,500 to the Forest Service.

The original number of sheep allowed to use this driveway was established at 50,000 head and after a few years increased to 65,000 head. But such close use of the trail has resulted in considerable injury to the forest cover, as might well be expected. It was, therefore, considered best to reduce the number of sheep using the driveway to 50,000, beginning with the grazing season of 1920, and this has been agreed to by the stockmen. Inasmuch as the herds move across the Forest within a short time of each other for about three weeks, the entire length of the trail is practically covered with herds of sheep. In order to prevent mixups and entanglements as well as trespass upon the adjoining forest ranges, it has been necessary for the Supervisor to employ extra guards during this period. This expense was something which the District Forester felt the Forest Service should not have to pay, and therefore it was put up to the sheepmen who agreed to furnish the money for the payment of these guards with the understanding that they be selected and supervised by the Forest Service.

Many of the sheep which originally crossed the Tonto Forest are now reaching southern Arizona by means of another driveway located farther west, which in some seasons has carried both ways as high as 180,000 head of sheep. Here, too, it is going to be necessary to make heavy reductions if the range within the driveway is to be preserved from total loss. These reductions are naturally strongly opposed by the interested sheepmen, but under the circumstances there does not seem to be any other course for the Service to pursue. The sheepmen who cannot use either driveway to reach the southern Arizona ranges can ship the sheep by rail, a more expensive method than driving, but not impracticable.

W. C. BARNES.

Art an Ally in Forest Protection

That this country needs a ministry of fine arts to save us from a complete loss of artistic sense and protect us from the miles of hideous sign boards along our highways was brought out by James Pennell, illustrator, artist, and etcher, at a recent address in Washington.

Mr. Pennell deplored the fact that the traveler as he journeys forth to get a touch of nature finds himself traveling through a tunnel of sign boards which deprive him of the enjoyment of nature and so obscure the roads at turns

Art an Ally in Forest Protection (continued)

and cross roads as to make travel positively dangerous.

In driving home this point and emphasizing the need of education, Mr. Pennell called attention to another phase which should appeal to foresters. Sign boards, he said, consume many million feet of lumber and so increase the drain on the forests for timber that could be used to much better advantage if saved from this desecration of the country and put to useful purposes in worth-while buildings. The fact that the forests of the country were being needlessly devastated and used for sign boards was very vigorously stated. He had as his slogan "Forest Devastation Must Stop".

There is no question but that a reiteration of this sentiment by all who favor the protection of our natural beauty spots will be helpful. Protection of this sort, such as it is, is in effect on the National Forests at the present time, for no sign boards are allowed except small directional signs. Private owners, whose appreciation of a few dollars is keener than their sense of the artistic, continue to allow the sign board companies to disfigure the country by a large sign. Instances of this kind will serve as fertile fields for education by forest officers of the locality. In many States signs of this kind are protected by legislation. In others the county commissioners and attorneys who have a better appreciation of the fitness of things have put an end to the existence of such signs.

Instances are known where local merchants who had erected signs voluntarily removed them at the suggestion of forest officers, although they were on private lands. Such suggestions awakened the merchants' undeveloped sense of beauty and made them realize that a road into a community which showed the natural beauties of the country was much superior to an approach through a hideous tunnel ablaze with advertisements of 57 varieties of junk.

KELLETER.

Washington Notes

M. E. Fagan left on April 2 for the West, where he will visit Districts 2 and 3.

Preliminary reports which are being received from the men at work on the Capper Resolution contain some mighty interesting information. They indicate among other things, that the demand for lumber in the South has more than doubled in the past ten or fifteen years and indicate that it will double again in about the same length of time. They show also that the timber supply in the southern States is steadily decreasing. In other words, the consumption curve is rising rapidly while the production curve is decreasing. From the figures at hand the indication is that in ten to fifteen years the South will barely be self-supporting as far as timber is concerned.

Jesse W. Nelson of Grazing left April 5 for an extended trip to the Districts, which will keep him in the West practically all of the coming summer.

Mr. Sudworth reports that rabbits and mice created such damage in the plantations at the Letchworth Park and Arboretum in Wyoming County, New York, during the past winter that it was necessary to obtain permission from the State game authorities to kill the rabbits out of season. In some of the plantations as much as 25 per cent damage was caused by the rabbits, which ate off the tops of certain species. The damage by mice was more spectacular, although not as serious. In a plantation of Scotch pine about 6 or 7 years old, mice caused the loss of 5 to 10 per cent of the trees by girdling them at the base underneath the snow. Various methods of destroying these pests have been tried out and good results secured. Farmers in the vicinity are accustomed to cleaning up the rabbits with shotgun and traps without recourse to the authorities, but the commission thought it desirable to obtain the necessary consent before proceeding to get rid of the pests.

An example of how prices are soaring is furnished in a bid received by Exhibits on a 6' x 3' working model of a fight with a forest fire. The price submitted by a New York firm of model makers was $4,000. A model with practically the same amount of intricate mechanism was made about five years ago for $660.

At various times in the past working plans for a number of military reservations have been made by members of the Forest Service. In most cases little or nothing has been done to carry out the provisions of the plan. It now appears, however, that the War Department expects to take active steps to handle its woodlands in the proper manner. The various working plans have been concentrated in the office of the Construction Engineer, who has requested Major Stuart to go over the entire matter with him in order to arrange some scheme by which the plans already made can be put into effect.

Acquisition Notes

A review of the cost figures for the survey of lands being acquired under the Weeks Law in the White Mountains and Southern Appalachians brings out some interesting facts. The following table shows the cost since 1914, and the figures embrace every item of expense that enters into the project and include the painting of lines after they have been located, as well as the preparation of maps and descriptions.

Fiscal Year	Cost per Acre
1914	20.6 cents
1915	17.2 "
1916	23.0 "
1917	20.4 "
1918	37.3 "
1919	22.6 "

Since little surveying is involved on lands being acquired in public land States (Alabama and Arkansas) the areas acquired in these States are not considered in arriving at the average cost.

The cost of subsistence per man day since 1916 is shown by the following table:

Fiscal Year	Cost
1916	$ .93
1917	.73
1918	1.12
1919	1.28

The most startling figures are those showing time lost because of Sundays, holidays, and inclement weather. In the fiscal year 1918, 33% of the field season was lost on this account, 17% of which is charged to inclement weather such as rain and snow. In the fiscal year 1919 the loss amounted to only 29%.

The net area of lands surveyed by fiscal years is as follows:

Fiscal Year	Net Acres	Net Acres (additional) Public Land States
1913	303,627.27	
1914	365,431.72	
1915	489,473.81	
1916	152,739.75	
1917	138,117.18	13,988.70
1918	91,985.39	23,964.92
1919	115,514.67	20,457.16
Total..........	1,656,894.79..................	58,410.78

The title and location of lands being acquired are based on grants issued by the crown of England before the Revolution and by the States after the Revolution. Most of the State grants have been issued without any regard to previous grants, with the result that much of the land is covered by two or more grants. In fact some lands are covered by as many as six grants. This situation seriously complicates the proper location of property lines of these lands. Another trouble is that the original surveys were often inaccurate and most of the corners are now missing. The result is that the survey costs are considerably increased by the supplemental surveying which must be done to eliminate all lands which cannot be acquired under the vendor's title.

Since the beginning of Acquisition work, 1908 tracts have been surveyed, exclusive of exceptions and laps which in themselves represent a considerable number of separate surveys.

Forest Products Laboratory Notes

Preliminary arrangements are well under way for a big "get-together" at Madison during the latter part of June to celebrate the tenth anniversary of the opening of the Forest Products Laboratory. It is expected that a large gathering of representatives from the various industries interested in the laboratory's work will be present, and opportunity will be afforded for recreation as well as for becoming more familiar with the extent and significance of the laboratory's activities. Present plans call for a two-day meeting, with addresses by men of national reputation in science and industry, a banquet, tours of inspection through the laboratory, informal discussions, and various forms of entertainment. Detailed arrangements will be announced later.

At the request of O. L. E. Weber, Manager of the Watab Pulp and Paper Co., exhibits of some of the work of the laboratory are being made up. These exhibits are in duplicate. Mr. Weber intends to present one of them to the owner of the Chicago Evening Post, who is also the owner of the Watab Pulp and Paper Co., and the other to E. T. Meredith, the Secretary of Agriculture. The exhibits are attractively mounted on a brown background and framed in brown stained poplar.

Dr. Otto Kress, Chief of the Section of pulp and paper has left for an extended visit East where he will supervise in several mills the production of linter pulp, produced in commercial digesters, into papers of various qualities.

The following is quoted from the March issue of the American Wood Preserver's Association:

"One of the most interesting subjects presented at the convention was handled by C. J. Humphrey, Pathologist at the Forest Products Laboratory, and in spite of the fact that there was considerable discussion as to whether 'John, who had never had much education, could understand what it was all about', we believe that real progress has been made by Mr. Humphrey in presenting the most important subject of 'The Common Forms of Fungi that Attack Cross Ties', in a manner that was readily understood by all the members of the Association who were present. It is a real pleasure to have subjects of this kind presented in words of one syllable."

"Because of the intense interest displayed in the paper, the Executive Committee has authorized the Publications Committee to prepre color plates showing these fungi for inclusion with the paper in the proceedings. It has further authorized the printing of this paper and these color plates in a special booklet for sale to the railways and tie companies for distribution among their timber inspectors."

Distinguished visitors this week: M de Wachenfelt, a member of the Department of Agriculture of Sweden; T. Nagayama, Secretary of the Department of Forestry for the Island of Formosa; and Dr. R. A. Pearson, President of the Iowa State College.

During the period of the war, Dr. Pearson was Assistant Secretary of Agriculture, being assigned the special work of increasing wheat production. He was particularly interested in the stock food from sawdust.

The much mooted, much sooted jazz smoker of the Forest Products Club in honor of the new members of the laboratory staff was pulled off at the University Club in Madison last month.

Early in the evening the card tables were the centers of attraction and every known game from cribbage to smear was undertaken with that gravity and earnestness which is typical of scientists. A genuine jazz band appeared on the scene later and soon had every foot under the table tapping in time with the music and the shoulders of the younger and irresponsible element swaying in a way that simply isn't done at bridge.

Mr. Winslow and Mr. Upson were the principal orators and their talks were followed by desultory speech making, which brought to light a few real new stories. After disposing of a huge amount of eats those who were not too full for utterance proceeded to make the night miserable for the inmates of the University Club with their close harmony. It was some party.

District 1 - Northern District

The fire conference at the Savenac Nursery has been finished after a meeting of nine days. The conference was attended by all of the fire assistants in the District and one ranger from each Forest in western Montana and Idaho.

The meeting was devoted almost entirely to discussions of actual fire protection problems with special reference to fire fighting methods as applied to the various fires of last summer. Many of these fires were analyzed in detail and the methods of handling them were commented upon and criticized, and the fire suppression force was given an opportunity to familiarize themselves with the program for the coming season as formulated by the Board of Fire Review last fall.

In the matter of forest fire protection work, the Coeur d'Alene Timber Protective Association is considered by timber owners to be one of the most efficient in the Northwest. As shown by the Association's 14th annual report covering the year 1919, the contributing members of the association own 562,509 acres of land requiring protection from fire. The average cost of fire protection for the past 14 years has been 6.27 cents per acre. In 1919, however, the cost per acre went to 29.23 cents. The largest fire in 1919 covered 8,000 acres and destroyed 20,000,000 feet of merchantable timber. It is noteworthy that this disastrous conflagration was caused by brush burning. There were four brush burning fires in all. Seventeen lightning-caused fires burned over 1,096 acres and destroyed 1,870,000 feet of merchantable timber. Eleven fires were started by careless campers. They covered some 200 acres of land and in addition to burning 100,000 feet of green timber, destroyed one house. Cigarette and other "smokes" have charged against them four fires and the loss of 7,000 feet of timber on a little over 360 acres.

The Jefferson Forest reports that 90,000 acres of extensive grazing reconnaissance was accomplished last year by the local force and that a considerable amount of enthusiasm is now evident over the result. This is considered a very good acreage to be covered under the very adverse conditions prevailing last year, and is by far the largest area reported from any other Forest in this District.

The Forest Service has just completed a bridge across Savenac creek at the Savenac Nursery, a welcome improvement to travelers over this stretch of the Yellowstone Trail. The bridge is entirely of concrete. Wingwalls, with pleasing curves, join the fence line on either side and extend above the ground to meet the paneled railing of the bridge. Considerable filling at both approaches is necessary before the bridge is open for travel, but this will be done in connection with the balance of the grading from Wenee Spur to the west end of the nursery. The county has offered to cooperate with the Forest Service in the completion of of this stretch of road. Construction has been under the supervision of Engineer S. H. Ketcham.

At a recent conference in Boise, Idaho, between members of the State Land Board of Idaho, Supervisor Flint of the Kaniksu Forest, and the District Forester, a tentative agreement was reached with the State under which the 200,000,000 feet sale of timber on State lands within the boundaries of the Kaniksu will be handled under certain Forest Service regulations. The purchaser will probably be called upon to deposit $1.00 per M which will be used for marking and brush disposal.

R. P. Hicks, forest products engineer, Madison Laboratory, spent a few days in the district office this week en route from Southern California where he had spent the winter.

"Skep" Knouf is back on the job in Silviculture after an eight months' assignment on cooperative work with the Winton and Potlatch lumber companies at Bovill, Idaho.

Miss Julia Graff, Forest Clerk on the Bitterroot, returned last week from three months' leave spent in San Diego, California.

"Engineering" announced the arrival of Joe Halm, Jr., March 20, with the customary offering of candy and cigars.

District 1 - Northern District (continued)

R. P. McLaughlin, former Supervisor of the Blackfoot, arrived March 21 to take up his new work in Education and Information in the near future.

W. M. Nagel resigned his position with the office of Planting, effective March 18, to take up private work in Detroit, Michigan. Mr. Nagel entered the Service in 1914, immediately after his graduation from Amos College, Iowa. He has demonstrated unusual versatility by adapting himself to conditions in a wide range of assignments, while his work in Planting has been particularly valuable. The Service keenly regrets the loss of its technical men, of whom Mr. Nagel is a fine type.

Nearly coincident with Mr. Nagel's resignation comes the announcement of his marriage to Miss Ruth Hart of Missoula, March 17. Members of the District Office extent congratulations to Mr. and Mrs. Nagel, and every good wish for future happiness and success.

District 2 - Rocky Mountain District

An allotment of $4,200 has been made for insect control work on the Durango Forest this spring to follow up the work done there last year at a cost of about $5,000. The stand to be protected is estimated at approximately 100,000,000 feet of western yellow pine, and control operations are being carried out along the lines suggested by Ralph Hopping, who was loaned to this District for a short time last year by District 5.

The present high market price of lumber has resulted in an application for a body of timber on the Medicine Bow Forest to be manufactured into lumber by a sawmill at Laramie. The operator agrees to pay a price equivalent to what the material would bring if manufactured into hewed ties at a stumpage price of 13¢ per tie. Until recently, we have been forced to restrict sales on the Medicine Bow to such sizes of trees as would hew into ties because the larger saw log material could not be handled at a profit. It now seems likely that the operator above mentioned will not only take all the saw log trees on his going sales, but will also go back over a considerable part of the area already cut over for hewn ties in order to take out the trees above 15½ inches d. b. h. for saw logs. This cutover area will probably yield from 6 to 10 saw log size trees per acre. It also appears that the removal of the larger trees on the big tie sale on the Washakie Forest can be secured, as the new manager of the Wyoming Tie and Timber Company proposed to put in small mills to manufacture log trees into sawed ties.

A. P. Russell, surveyor-draftsman in the District office has resigned to accept a position with the State Highway Department of Wyoming. Mr. Russell has been a member of the Forest Service for the past six years, with the exception of the time he spent in the Army.

District 3 - Southwestern District

Governor Larrazolo, in his Arbor Day proclamation, has emphasized the need of preventing forest fires, and invites all teachers, Forest Rangers, or others having knowledge of the best methods of preventing forest fires to deliver lectures to the public and to school children on this subject. Arbor Day is a day in which the Service can well afford to take a leading part. If the rising generation can be taught respect for forests and forestry, the coming decades will have a very different story to tell in contrast to the profligate wastefulness of the present and preceding generations. An hour or two devoted by members of the Service to forestry and fire prevention in the public schools on Arbor Day will have a lasting influence on many future citizens.

Ranger Asa E. Messer of the Manzano Forest had a siege of the "flu" and, not being satisfied with that, he had a try at the mumps. Needless to say, he became quite swelled over this combination and felt that he did not need to work for a while. Upon the advice of his physician, he departed for the home of his parents on the Lincoln Forest to spend a couple of weeks.

"Speaking of the permittee named Goats, who is a cattleman: recently a man named Pinon bought ten cords of Juniper wood from Walnut Creek on the Tall Pines District."

--The Gila Forest.

District 3 - Southwestern District (continued)

Ranger Rice of the Tusayan Forest submits a local sales policy letter written in 1908 regarding the handling of cordwood sales, which states in part:

"Young thrifty trees from which only the stem could be used are under no consideration to be sold but are to be retained for next year's crop."

Apparently juniper was then considered a biennial.

District 4 - Intermountain District

The following letter has been received from Governor Bamberger in the matter of issuing a proclamation setting aside the week May 23-29 as "Forest Protection Week":

"I have read with interest your letter of March 19th in relation to your proposed campaign on forest fire prevention.

"I shall be very glad to issue such a proclamation as you suggest when the proper time arrives. I should be glad to have you call my attention to the matter about May 1st, which will then allow ample time for the issuance of the proclamation and its circulation."

A special rule was recently recommended by the Fishlake Woolgrowers to the effect that a certain sheep herder should not be allowed to work on the Fishlake Forest. Under the regulations, of course, this rule could not be approved.

"When the Creator had made all the good things, it seemed there was still some dirty work to do, so He made the beasts, and the reptiles, and the poisonous insects; and when He had finished He still had some old scraps left over that were too bad to put into the Rattlesnake, the Hyena, the Scorpion, and the Skunk; so He put all these together, covered it with suspicion, wrapped it with jealousy, marked it with a yellow streak, and called it a KNOCKER.

"This product was so fearful to contemplate that He had to make something to counteract it, so He took a sunbeam, put into it the heart of a child, the brain of a man, wrapped it in civic pride, covered it with brotherly love, made it a believer in equality and justice, a worker for and supporter of every good thing in the community and called it a BOOSTER; and thenceforth mortal man has had the privilege of choosing his associates."--Anonymous.

Supervisor W. W. Blakeslee of the Uinta Forest has lately placed an order with the Salt Lake City Stamp Company for 14,000 tags to be used in tagging permitted stock to be grazed on Districts 7, 8, 9, and 10, of the Nebo Division of the Uinta. Each of the nine associations operating on the above districts have asked for and secured the approval of a special rule by the District Forester authorizing the levying of pro rata assessments against permitted stock to cover the cost of tagging.

After 11 years of service, first in the capacity of Draftsman and later as Chief Draftsman, Mrs. Florence I. Shafer has tendered her resignation effective at the termination of March 31, for the purpose of entering private business. Mrs. Shafer's friends in the Forest Service cannot be counted, for she has enlisted the respect and regard of all, and all of us wish her much success in her new line of work.

The Bruneau Livestock Association on the Humboldt Forest recently voted for the construction, under Reg. G-4, of a 12-mile drift fence to be finished within three years, which will cost approximately $5,000. About 1,600 cattle and 710 sheep use this area, and the owners of this stock will be assessed by the association for the construction cost. Members of the association intend to do a considerable portion of the work on the fence themselves. The proposed fence will prevent horses from grazing the winter range during the summer, and prevent cattle from drifting onto the winter range before the opening of the winter season.

A good deal of the credit for securing the cooperation of the association in this matter is due to Ranger Ralph M. Matthews.

District 5 - California District

At the request of other Districts, a Law Enforcement Conference starting March 22 and ending March 26 has been held.

The meeting was opened by Mr. Redington with an address on "What Law Enforcement Means in our Organization". Lots of interest and "pep" were shown in

District 5 - California District (continued)

all the sessions. Sergeant McConnell of the San Francisco police, Chief Vollmer of Berkeley, Col. Thomas, State Forester Homans, and others were on the program.

Those attending from other Districts were J. E. Scott in charge of Information District 4; W. E. Osburne Jr., Fire Chief District 6; C. W. Boyce, Forest Examiner District 6; F. W. Morrell, Assistant District Forester, District 2; John McLaren, Fire Chief, District 2; J. C. Kirscher, Fire Protection, District 3; and A. J. Devan, Forest Examiner, District 1.

The entire Sierra Forest has now been covered by grazing inspection. In addition, out of a total of 36 allotments, complete plans of management have been installed on 13 allotments. The nature of the work consisted of:-

1. The consolidation of many small ranges into community ranges.
2. Changes of seasons.
3. The adoption of definite salting plans, which required the placing of 714 salt logs.
4. The completion of 12 water development projects.
5. The construction of cabins, pastures, corrals, driveways, and trails for the proper handling of the stock, and the eradication of poisonous plants on areas infested.

Fourteen allotments were covered but not entirely completed. Six other allotments were partially completed, but future work will be postponed until the other fourteen allotments have been completely worked up. Only three allotments exist for which no plans were developed.

The above refers to cattle and horse grazing areas. Plans were completed and put into effect on fifteen sheep grazing allotments. Work on sheep allotments has been considerably reduced by the elimination of seven allotments within the area closed by the Forester's decision.

District 6 - North Pacific District

District 6 has discovered that boys will listen eagerly to the practical experiences of a plain ranger, look at the pictures he shows with more than passing interest, and examine the equipment he carries for their inspection with a higher motive than mere curiosity. Perhaps this has been best demonstrated by Albert K. Wiesendanger, of the Oregon Forest, who when his busy season opens at Eagle Creek Camp Grounds will have given an insight into the work of a Forest officer to at least 2,000 boys. "It looks as though there were not going to be enough ranger jobs in the Northwest to fill the demand these youngsters expect to make upon them when they grow up", says the Sunday Oregonian, in a story of this work. Acting upon Mr. Wiesendanger's cue, rangers from a few other Forests are planning to do likewise for the boys in their vicinities.

The need of a suspension bridge across the stream on Eagle Creek Camp Grounds has been overcome in a novel manner. Permanent piers have been erected, which support a detachable floor, to be removed during seasons when freshets might wash it away. It has been the usual experience to have the bridge over this creek carried off by high water.

"Lands" hopes to have photographs made from an airplane of the recreation area being developed along the shores of Elk Lake, about a mile below the summit of the Cascades on the Deschutes Forest. Already 22 summer home sites have been surveyed, but the final development and ensemble of the tract will be achieved by using aerial photographs as a guide, if such photographs can be secured. This is one of the most attractive summer home areas in Oregon. It is reached from Bend, central Oregon, by way of Crane Prairie, an extensive mountain meadow famous for duck hunting and fishing, and is near the route of the proposed Skyline road along the crest of the Cascades. Elk Lake is 5,000 feet in elevation and is noted for good fishing, as are also the nearby creeks and lakes.

The latest appeal for the influence of the Forest Service in choosing and perpetuating Indian and other suitable names in the Columbia River region came from a special use applicant for land on the Columbia Forest on which to grow basket willow. Mr. Riddell, a prominent Mazama, urged the fitness of the more pronounceable Indian names, or the names Lewis and Clark and other early explorers gave to points along the Columbia. "Every region has an atmosphere of its own. Names characteristic of the Hudson or Europe are out of place along the Columbia", he affirmed, and he cited cases where satisfactory naming and changing of names has been accomplished; for instance, Gordon Falls has been changed to Waukeena Falls and people are getting the habit of calling the point that Lewis and Clark named Beacon Rock by its right name instead of Castle Rock.

The Tongass Forest recently sent seed of hemlock (mountain and western), western red cedar, and Sitka spruce to the board of trade, Helsingfors, Finland; and of Sitka spruce and western hemlock to Bergen Museum, Bergen, Norway, and to the School of Husbandry, Holum, Iceland. About a pound of each kind went to each country.

Things have been moving rapidly for Supervisor Ramsdell of the Umpqua Forest of late, as he was promoted, married, and transferred in something over a month. Late in January he was made Supervisor of the Wenatchee Forest; early in March he was married to Miss Lucile Hyde Robinson of Omaha, Nebraska, whom he met in France; and more recently he has been transferred to the Umpqua Forest.

What one ranger meant to his community: the following is quoted from the Hood River (Oregon) News:

"Warren Cooper, for many years District Forest Ranger in this section of the National Forest, died of sleeping sickness on Wednesday, February 18.

"With the death of Mr. Cooper, affectionately known the State over as 'Barney', there passes from Hood River County one of its most unique and best beloved citizens. He is known to every woods lover in the county as well as to thousands of tourists, as a man of unfailing good nature, simple, unaffected and yet a passionate lover of the outdoors. His devotion to his duty, and indeed the keen sense of responsibility he felt toward his work as an official of the United States Government, has been the occasion of much comment on the part of those who were fortunate enough to know him. Mr. Cooper was not only a Forest Ranger, he regarded himself as Government host to the thousands who visit the Forest every year. All who kept the rules of the Department found him eager to have them share with him the glories of our common forest heritage. On the other hand, the lawless, whether acquaintances or strangers, found him inexorable in the enforcement of the law."

Formal notice was received at Portland on March 23 by Captain F. E. Ames and Major John D. Guthrie that they have been made chevaliers in the French order "Merite Agricole" for forestry work with the Twentieth Engineers in France. This order was established in 1883 and membership is given for meritorious work in forestry and agriculture. Most of the higher French foresters wear the decoration of the Order, which is a beautiful six-point star, in silver, and white enamel, backed by an olive wreath in green, with an accompanying ribbon in green with purple edges.

Although the Forest Service is not ordinarily concerned with the subject of shade trees for city streets, there are situations where, by a slight effort, members of the Service who are qualified can be of material assistance to their communities. In Portland, Oregon, for example, the neglected and mutilated condition of the street trees has prompted the writing of a series of articles in one of the Sunday newspapers with the object of arousing public interest in placing the city shade trees under the management of the Park Bureau. In this city, at present, the property line is the street curbing and property owners are unrestricted owners of the shade trees as well as the parkways. This has resulted in the planting of many undesirable species and in the serious mutilation of the trees everywhere by owners whose good intentions were not directed by a knowledge of trees. In the early articles of the series the mistakes and effects of bad treatment are being pointed out; in the later articles right methods will be explained, with diagrams; various trees adapted to street use in Portland will be described, and finally a comprehensive shade-tree policy for the city will be outlined. The articles are being prepared by Forest Examiner C. J. Kraebel, of the Wind River Experiment Station, who had experience in shade tree and landscape work in the East before he entered the Forest Service.

District 7 - Eastern District

A copy of the film which was taken by the Universal Corporation of the winter sports held on the White Mountain National Forest at Gorham, New Hampshire, in February, has been received by District 7. The film has not yet been edited or titled, but as soon as this can be done arrangements will be made for an exhibition of the film at the Department moving picture laboratory, to which members of the Washington office will be invited.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

April 12, 1920.

Continuation of $240 Bonus Seems Assured

Current press reports indicate that the sentiment in both houses of Congress is strongly in favor of continuing the $240 bonus for the coming year, and there seems no doubt that the item will be agreed to by the conferrees on the Executive, Legislative, and Judicial bill.

What the Secretary told the Committee

Excerpts from remarks made by Secretary Meredith, on March 8, 1920, before the Senate Committee on Agriculture and Forestry regarding the Agricultural appropriation bill for the fiscal year 1921:

"I have been around to all the bureaus and have made it a point to talk to the men at the head of them, and I have also talked with a number of their assistants. I have great confidence in them. I feel that, if I could in some way do something to make you gentlemen have the same regard for their recommendations and earnestness and ability to serve that you would have for some representative of a great corporation, say of the Standard Oil or the Steel Company, I would have accomplished something worth while. If a representative of a great corporation came in and made a statement as to the needs of his business, the value of certain expenditures, you would say that he ought to know simply because he is in a great enterprise. We have some wonderful men. I feel that, because of the lack of appreciation, if I may put it that way, because there are so many problems and the institution is so great, you can not come to have the confidence in their recommendations that you would have if you were closer to them. If you would go to the Dairy Division and go through its cheese laboratory, or to any of the other bureaus or divisions of the Department; if you could go through our forty-two buildings and meet the men and know what they are working on and see for yourselves the earnestness with which they are working, I believe then that, if they came before you with estimates, you would say: 'We will take their recommendations because they are not men who are slackers, loafers, or wasters, but are really high-class and capable men.'

* * * The point I want to make is that those men know their business. Otherwise, a commercial enterprise would not come along and give them two, three, or four times the salary they were drawing when they were making up the estimates for this Department. We would say today, now that they have secured these positions, that they are capable fellows, but they are exactly the same as when they were in the Department. There are other men still with the Department of the same type and earnestness, and it seems to me that, when they have gone into the estimates so carefully on somany matters that are of such vital and far-reaching importance, we should have a little more confidence in their recommendations.

* * * I would have no hesitancy, gentlemen, in saying that I can take the leaders of these bureaus, who are doing this wonderful work of the United States Government, and within a week place them with commercial enterprises at double the salaries they are now receiving; but while they do not expect that, and have not asked it, I do feel that when they stay here and are on the job to do these things, we should equip them so that they can render their best service rather than tie them down and have them disappointed by not being allowed to keep on doing some of the wonderful things they have done.

* * * You gentlemen know Mr. Graves, the Forester, who has under his charge 155,000,000 acres of land and one-fifth of the standing timber of the United States, who has licensed $300,000,000 worth of power, and who has increased the live stock on your domains from 1,500,000 head fifteen years ago to 12,000,000 today, or 800 per cent. Here is his resignation saying that he can not continue the work, that he is worn out, that it is tiring, that there is no hope of a competency in it, and that

before he ruins his health he must get out of the Government service. There are any number of others as indicated here. I plead with you that, when you have a man like Mr. Graves, he should not be discouraged and hindered in his work. I will guarantee that I could get Mr. Graves a position at $1,000 a month inside of three days. I know the man I could put my hands on who would be glad to get him. Yet the discouragement to him is that he is not equipped, not that he is not receiving enough salary. He said, 'I earned enough money up to ten years ago so that I can take my income and add it to my salary and live. I want to serve. I have served, Mr. Secretary, ten years and I want to do good service, but the discouragements and handicaps of not being equipped have worn me out.'

* * * I could talk all afternoon and tomorrow and the next day and go over these matters and give you what Mr. Harrison has given you in discussing these items in detail. You can not take the time, so what I want to do is to pledge to you that, in all my experience, no matter where - in the newspaper business, in the advertising business, or anywhere else - have I ever come in contact with a group of men whom I respect more than I do the heads of these bureaus and the men who are working under them. Never have I met men who are more capable of holding the jobs which they are holding and who are more willing to make a sacrifice to serve than they. Of course, there is bound to be some waste and inefficiency in any organization of 21,000 people. As a matter of fact, I have a little institution of my own, employing 300 people, and I know that there is some waste and inefficiency there. I feel that we, as a people, are not doing the wise thing when we do not equip these men to do their work. More and more are they going to drop out of the work if they are not equipped. There is general talk that there is a feeling that we must reduce expenses, that we must economize, and that there may be politics in this cutting.

* * * I came down to Washington with all kinds of enthusiasm, with a feeling of the great possibilities, but I say to you in all frankness that I would not want to work under all the handicaps, the strain and disappointments, for mere salary. I can not understand why more weight is not given by Congress to the estimates made up by these men of our Department. Do you know how long they have been working on this particular appropriation bill? You asked them to have the estimates ready last October. It took weeks and weeks to prepare them. Then they had four weeks of actual time arguing and discussing them with the House Committee. You know how much time they have had with you. Last year it was not until the latter part of July that the bill was passed. It is a lifesize job for a man the year around, is it not, just to discuss, arrange, and present the figures on this appropriation; and then after all that we do not get what we ask -- what is vitally needed."

Germany's Forests in the War and After

The following extract from a letter received from Dr. C. A. Schenck sets forth in no uncertain terms the manner in which the forests of Germany aided in the conduct of the war and helped meet post-war conditions. It forms one of the best arguments that could be advanced for the adoption of a definite national forest policy. The letter is written from Darmstadt and is dated March 10:

"I cannot write without adding a line about German forestry of today. We could not have stood the strain of the war, had we not had one-fourth of the country covered with well kept forests. Cellulose for nitro-cellulose, timber for the trenches, fibre for antiseptic bandages (in lieu of cotton), timber for rifle and pistolstocks, timber (ash) for aeroplanes, and so on, had to be and were obtained from the home woods. In addition the native woods had to yield the tannin which had been obtained, more recently, entirely from importations.

More than that nowadays! Had we not preserved our forests we would have been frozen over and over, since we have lost one-third of our coal mines, are forced to export part of the coal actually mined, and are confronted by a gigantic deficit in the amount of coal mined per diem and per workman, on a 6-hour day basis. Thus it happens that Germany would have been and would be today in a sad plight, had it not been for her woods well distributed over the whole country.

Naturally, the private owners have been the main beneficiaries of the situation. During the war, prices moved upward; cull became as valuable as F A S had been. The stumpage of ash poles, standing in the woods, e. g., obtained a value of $90 to $100 per M feet b. m., Firewood prices rose from $10 a cord (in the woods) rapidly to $45 a cord in my neighborhood and so on, and so on. The finest forests being owned by the states and the municipalities, the people themselves were among the benefit ed."

Since the end of hostilities (lo! if they are actually at an end!) the upward tendency of prices became still more distinct. Spruce logs, worth $20 before the war, command now a price of $500; pulpwood sells at $180 - $220 per cord, instead of commanding $9 per cord.

Naturally, in these figures the decreased value of the German mark has been neglected. Were we to consider that frightful decline of the "purchasing power" of the German mark, the present prices should be divided by about 20 -- with the result that, from the American dollar standpoint, the prices of timber products are now not higher than they were before the war.

It's queer, and the time may not be far off, when German oak and beech and birch is exported to America or to the same country from which we have obtained, in former decades, large supplies of lumber and timber. Of course, we know that the rise of timber and lumber prices in the U. S. A. has been appalling, too, actually (in gold standard) much more so than the rise of prices in Germany.

In view of the lack of coal, German forestry is now compelled to abandon the principle of actually conservative cutting, for the first time. This means to say that for the first time more wood and timber is being cut, than is being replaced by the annual growth or accretion of the woods. Still, it isn't bad. We cut perhaps twice as much as the actual growth, and shall begin to economize and to replace what has been cut in excess of reproduction as soon as the coal famine is over. It seems to me that Col. Graves in his propaganda for forest protection has no better card in his hand than that reading:

In case of war abroad
In case of industrial war
A country is lost
Without woods
Well distributed over the country.

I would not rely, in my public addresses, on the old 'Tomyrot' of indirect climatic effects of the woods which all climatologists deny, nowadays. You have better facts to put before the people of the U. S. A. The woods are as necessary, for the inner and outer defense of a country, in time of need, as are battleships and armaments and battalions of soldiers. Also the woods are the savings bank of a nation, to be relied upon in time of extreme need."

This Man Made Forestry Pay

A glib-tongued, plausible person representing himself to be Assistant Forester H. Leon Genet of the U. S. Forest Service, recently has been operating in the neighborhood of Fredericksburg, Virginia, to the sorrow and distress of the trusting inhabitants. Posing as a high official of the Forest Service, Genet entered into all forms of forest work with enthusiasm and no little success.

His initial appearance was at the meeting of county extension officers at Blacksburg, Virginia, last December, where his pleasing personality, knowledge of forestry, and position (?) in the Service made him quite popular. He was so much interested in the work that he offered his services to assist the county extension agent at Fredericksburg, Virginia, in revealing the benefits of forestry to the farmers in that vicinity. The campaign of education was so successful that his fame spread abroad and agents from neighboring counties came over to see him and obtain pointers.

Mr. Genet got many results. His close association with county extension officers impressed the local people with his position and reliability and they were easily induced to cash checks, make temporary loans, and extend other little courtesies to the distinguished personage in their midst. It is reported that he applied at one of the embassies in Washington for a position in South America and even arranged for transportation. Unfortunately before leaving his fruitful Virginia field, he neglected to attend to such trifling matters as repaying loans, leaving enough money to cover outstanding checks, etc., or to pay board bills. The most unkindest cut of all lay in the fact that he sold the Ford runabout belonging to his friend, the county agent, to an unsuspecting farmer for the sum of $200, without saying anything to the county agent about the transaction.

Whether or not he has actually left for South America is not known, but if the police in Washington and other points succeed in locating him in this country, it is probable that his work in forestry will be decidedly curtailed for a number of years to come.

This man evidently saw and took advantage of a hitherto unrealized opportunity. He is one of the few who has made forestry pay.

Incidentally, he is described as being about 5 feet, 3 1/2 inches in height, has dark hair slightly streaked with gray, and peculiarly short teeth. He is actually about 49 years old, but would pass for 55. He speaks English with a slight French accent. Apparently he has gotten hold of Forest Service maps, note books, etc., and is well acquainted with the general work.

Airplane Patrol to be limited to California

The Secretary of War has just informed the Secretary of Agriculture that, due to a lack of funds, cooperation of the Army Air Service in forest fire patrol for 1920 will be limited to one aero squadron in California. For the time being, therefore, there seems to be no possibility to extend the airplane patrol to Oregon, Washington, Idaho, Montana, and Wyoming, as was hoped.

An item of $60,000 was inserted in the Senate in the Agricultural Appropriation Bill, which is now in conference, but no inkling as to what will happen to the item has been received. It was contemplated that this money was to meet the Forest Service expense in the proposed extended patrol plan, contingent, of course, on the ability of the War Department to do its share.

To Use Hydroplane for Extensive Mapping

Mr. Stuart has received a letter from a friend who is employed with a pulp concern in northern Canada, in which it is stated that the company proposes to purchase a hydroplane this season for the purpose of making extensive mapping and cruising surveys of its timber. While it is realized that this method of survey is not accurate, it affords a means of securing at reasonable cost an excellent idea of the location, extent, and general character of timber bodies, which could be explored otherwise only at a considerable expense of time and money. Companies which are large consumers of timber can, in this way, determine the timber regions of greatest promise and plan for intensive timber work preparatory to acquisition and exploitation.

Articles Submitted for Publication

During March the following articles were reviewed and permission for their publication was secured:

Title	Author	Written For
The Game Situation in the Southwest	Aldo Leopold	Bulletin of the American Game Protective & Propagation Ass'n
Present Day Development and Possibilities in the Practice of Forestry in the Inland Empire	John F. Preston	American Forestry
Drying of Plywood Panels	D. R. Brewster	Furniture Maker & Artisan
Self Government in Forestry	Wm. B. Greeley	Journal of Forestry
Studies in Soil Aeration in India	C. F. Korstian	Journal of Forestry
Black Walnut in Utah	C. F. Korstian	Journal of Forestry
Good and Bad Kiln Drying at Typical Factories of the Southern Furniture Manufacturers Association	C. V. Sweet	By the Southern Furniture Manufacturers Association

Articles Submitted for Publication (continued)

Title	Author	Written For
Successive Stages in Forest Destruction by Fire	J. V. Hofmann	American Forestry
The Management of Hardwood Forests in the Southern Appalachians	I. F. Eldredge	Journal of Forestry
Distinguishing Characteristics of the Pines of the U. S.	W. H. Lamb	Technical journals
To Fire or not to Fire	R. F. Hammatt	Saturday Evening Post
Windbreaks on Reclamation Farms	C. G. Bates	Reclamation Record
Problems of Land Ownership in the National Forests	E. A. Sherman	The Ames Forester
Forestry in France	Wm. B. Greeley	Two Chapters for a book being written by T. S. Woolsey Jr.
Brief Review of the Pulp & Paper Industry in 1919	Otto Kress	Chemical Annual, Journal of Commerce
Plan of Relation of Forest Regulations to Forest Communities	M. H. Wolff	Journal of Forestry
The Empire State and its Wood-Using Industries	F. H. Smith	The Conservationist
The Old Order Changes	H. A. Smith	Journal of Forestry
Game Refuges and the Livestock Industry	Ward Shepard	National Wool Grower
Auto Camp Conveniences	A. H. Carhart	American City
The Sangre de Cristos	A. H. Carhart	Some outdoor magazine
A Forest Home for Everybody	A. H. Carhart	Good Housekeeping
Some Forest Products and Utilization Problems on the National Forests of the Inland Empire	C. L. Billings	Timberman, or American Forestry
Distillation of Resinous Wood	L. F. Hawley	Trade journals

Concerning the Bulletin

"Why is this or that district given so much space in the Bulletin when the other districts have so little?" the editor of the Bulletin is very often asked. The answer is that the districts in question send in plenty of suitable material and get it in on time. The editor of the Bulletin would much prefer to have all districts equally represented. But his first concern is to get hold of interesting and useful material that will make the Bulletin readable and valuable. He can not dig all of this up by himself; he has got to rely on the districts to send in the news.

The matter rests primarily with the districts. One page of the Bulletin will be devoted to each district and the Madison laboratory, and one-half page for

Concerning the Bulletin (continued)

acquisition, provided the character of the material justifies this allotment of space. The allotment is purely tentative and the editor reserves the right to shorten or omit items from any district in order to make room for more interesting material from other districts. In other words, it's up to the districts to come through with snappy, worth-while stuff.

It is realized, of course, that news doesn't happen uniformly. On the contrary, it comes in bunches. But there is an abundance of good material in all the districts that can be dug up even at times when things seem dull.

There have been some complaints about the delay in getting the Bulletin into the hands of the field men. On account of the handicaps under which the publication is issued, some delay is inevitable, but a plan is being tried which, it is hoped, will result in getting the Bulletin out more promptly than has been possible of late. For the present, the publication date will continue to be Monday of each week and material from the districts should reach Washington not later than Thursday.

Changes for Reclassification Report Suggested

The advisability of having each bureau chief in the Department of Agriculture determine and point out any inequities in the report of the Reclassification Commission has been suggested by the Secretary's office as a result of the discovery of errors in the reclassification plan which have been made by one or two bureaus. It is possible, therefore, that the whole question of reclassification of salaries, as far as it applies to the Department of Agriculture, will be re-opened. Mr. Merrill and Mr. Anderson will handle the matter for the Forest Service.

One of the most serious objections to the Reclassification Report is the proposed scheme for handling promotions and transfers. The plan as outlined provides that no vacancy could be filled or promotions made except from a certificate of eligibles to be composed of persons who passed civil service examinations. So far as the examination for promotions is concerned, it is believed that this would tend to keep the men in the Service up on their toes and thoroughly abreast of their work. The objection would come in filling high administrative positions. Under the proposed plan any forester who had passed the civil service examination might, for example, be eligible to a position for district forester, although his training and experience might have been entirely at variance with the policies, principles, and methods of doing business of the Forest Service.

Washington Notes

Assistant Forester E. E. Carter, who has recently returned from a trip to the Appalachian Forests, reports what he considers a remarkable accomplishment by the Service in stopping forest fires on areas where fires have always burned in the past. Mr. Carter cites the instance of Stony Creek Valley on the White Top purchase area in eastern Tennessee. Up until the time the Government began to make purchases in the valley about seven years ago, the woods were burned at least every year. Since that time less than one per cent of the area has been burned over. The effect of this fire protection is already beginning to be apparent, Mr. Carter states. Stony Creek, which has in the past been prone to cut its banks and wash out bridges after heavy rains is now more even in its flow and does not flood badly after even unusual precipitation.

The more progressive element in the southern mountains have long been in favor of fire prevention, but being in the minority and desiring to avoid trouble with their neighbors, they kept their opinions to themselves. Since the Government has come into the country and inaugurated fire protection, these people are lining up on our side and using their influence to keep fires out.

Mr. Carter cites the instance of one farmer who had a few acres of mountain land on the back side of his farm. When asked recently if he would sell this to the Government he said, "No; since the Forest Service has come in here and has stopped the fires, my land is growing timber." His woodlot is now a valuable part of a balanced farm, while as long as the habit of the community was to burn the woods it was unproductive.

Washington Notes (continued)

Information received from the men engaged on the Capper Resolution report contains some startling lumber prices. White oak veneer logs, for example, are quoted at $200 per M feet at the mill in Indiana.

The increased price, partly in the shape of freight, which the East is paying for lumber, as a penalty for having used up its own forests without providing for the future, is shown by comparison of retail prices on Douglas fir flooring. Lumber of this character brings $85 in Portland, Oregon, and $152 in Pittsburg, Pennsylvania.

How yellow pine is advanced is shown by figures obtained at Dayton, Ohio. In 1893 yellow pine boards sold at $10 per M and in 1897 at $11.50 per M; in 1920 clear lumber sold at $185 to $195 per M, and No. 1 common boards sold at $130 to $140 per M.

In 1805 white pine at Pittsburg sold at $5 per M; in 1882 white pine uppers sold at $10 per M; in 1920 prices on eastern white pine were no longer quoted at Pittsburg. Small quantities were marketed at from $240 to $260 per M. Some so-called white pine, which was probably either western white or western yellow, was sold at prices ranging from $150 to $200 per M.

The variation between retail prices and mill prices is much greater during the present period of shortages and high prices than before the pre-war period of more abundant supplies. An indication of this is the sale of quartered white oak in Pittsburgh in February, 1920, which retailed from $397 to $422, averaging possibly $412. This material cost at the mill about $297, leaving a margin of $115 for freight selling costs, profits, etc. In 1912 similar oak was purchased at the mill for about $78 and sold at retail for about $105, leaving a margin of $27.

Prices alone do not tell the whole story. Increases can not be attributed wholly to such factors as shortages and profiteering. Currency inflation and increase of the gold reserve must also be taken into account.

Forest Products Laboratory Notes

The membership of the Madison Section of the Society of American Foresters now numbers 71. This is believed to be the largest section of the Society. Among the out-of-town members are C. R. Garvey of Milwaukee, Wm. L. Hall, George Lamb, and F. A. Silcox of Chicago, and O. T. Swan of Oshkosh. The next meeting of the Society will be held in April and a special program is being arranged which it is hoped will provide a prominent out-of-town speaker.

The 4-ONES Wirebound Box Manufacturers' Association will hold the May meeting in Madison Thursday and Friday, April 13 and 14. Arrangements have been made to have them visit the laboratory and several members of the laboratory staff will deliver addresses.

Six years ago the laboratory placed specimens of greenheart in the Gulf of Mexico, in waters infested with pholas, xylotrya, and limnoria. A recent examination of the timbers showed that, except for a very slight trace of limnoria on the sapwood of one specimen, they had been uninjured by either xylotrya or limnoria, although these borers are very active in this vicinity. All the timbers, however, were severely attacked by pholas. The surfaces of each specimen were covered with burrows from three-fourths to one and one-half inches deep.

Arthur Koehler, Wood Technologist at the laboratory, is in Arkansas collecting logs. There is a bit of local color in the following letter from him:

"White oak is easily obtained but the other species are scattering, and I may have trouble in getting enough of them. It is exceedingly difficult to tell the species. The local names help me very little, although I always ask the darkies or a white man, if one is around, what they call the tree. They call willow oak 'pin oak,' and water oak 'black oak,' and they don't always agree in naming a tree. By taking into consideration local names, bark, twigs, buds, and leaves and acorns on the ground I believe I am getting the botanical names correctly.

I spent one-half day looking up fallen trees which had a few old leaves on the tree and in this way got their true identity and then carefully observed bark, twigs, and buds. This helped me greatly in identifying others without any old leaves on them. Yesterday we cut one down which the darkies said was white oak, and looked so to me when standing, but there were a few old leaves on the tree which I

Forest Products Laboratory Notes (continued)

soaked and then unrolled and found to be cow oak. In a few cases the tiny leaves are out enough to help in identifying the trees. This has the disadvantage, however, that the buds are no longer normal.

I expected to add quite a few to my list this forenoon although they told me that I would not get much done, it being Saturday and pay day. Last night word came that they had a lot of rain up river and the river had risen 30 feet. Since this is all swamp land the company got all their mules, horses, and oxen out of the woods last night and as many people as wanted to go. This morning we went back on the logging railroad, but saw no evidence of a flood, however, they will take no chances, for they were chased out of the swamp seven times in the last six months by high water. If the water does come in it will mean that I will be delayed several days. Needless to say, no timber was cut today."

District 2 - Rocky Mountain District

The construction crew on the North Creek road of the San Isabel Forest was reorganized last week, and it is planned to rush construction of the project. A section of this road is being built by the Forest Service and a section of approximately eight miles outside of the Forest is being constructed by Pueblo County. While this project is classified as a minor project, it is really a very important road in the comprehensive road system looking to the development of the San Isabel Forest, especially from a recreational standpoint.

As a measure of protection of the Durango-Silverton road, the Service has been successful in inducing the D. & R. G. road to build unloading pens and chutes at a point several miles below Silverton, which will take care of the sheep that would ordinarily menace this road if taken to their range in the usual way. Some 20,000 sheep are involved and the permits will be issued with the understanding that they will be shipped to and from the point where these pens will be built.

Assistant District Forester Fred Morrell and National Forest Examiner John McLaren have returned from the Law Enforcement Conference in San Francisco. At that meeting men in charge of the law enforcement in District 5 gave a great deal of information in detail about how the work has been handled in connection with the prosecution of all lines of trespass. District 5 has an organization for this line of work, and has gone very much more into detail in handling law enforcement than in any other district.

Representatives from all the western districts were present at the conference and appreciated greatly the opportunity for getting first hand information about the manner in which the work is carried on.

Mr. Morrell, Mr. McLaren, and J. C. Kircher of District 3 xxxx returned from San Francisco via Los Angeles and stopped over a day at March Field where they had an opportunity to go up in an airplane. Many items have already appeared regarding the advantages of airplane fire patrol and there is nothing more to add to these. Needless to say, each of the men gladly embraced the opportunity to go up, and were surprised at the ease with which the ship was handled in the air. It was their unanimous opinion that the development of airplane control holds unusual possibilities for detection work.

Assistant Forester Roy Headley and Forest Inspector in Charge of Fire Protection E. W. Kelley of the Washington office made a short visit to the District office on April 3, enroute to Missoula.

Telephone Engineer R. B. Adams of District 1 was in the District office for a short visit on April 3, while enroute to Ogden.

Ranger E. H. Peck from the Routt National Forest, who has been handling the work at the sign shop the past season, completed the work on April 3 and left for his headquarters on Easter morning. His train got as far up the face of the mountain as Tolland, Colorado, but found it impossible to get over the Divide because of snow blockades, two trains being already snowed under somewhere between Tolland and the western slope. Mr. Peck returned to Denver and has no prospects for reaching his district before the end of this week.

It may be interesting to note that over 1/3 of the ranger eligibles this year have military preference.

At a recent election of officers of the Saguache County Sheep and Wool Growers Association, an advisory board of five members was appointed, of which four were ex-forest officers.

District 3 - Southwestern District

What will weather conditions be in general during the coming five years - a big drought, normal moisture, an excessively long winter? Will it be wise to embark on a stock raising venture or attempt starting a dry farm now or wait two years? These and similar questions, how often have they been asked, and debated mentally by the man with limited capital starting on a new venture. And yet the answers may not be so difficult nor the means of answering them so far in the future if studies on weather records as shown by tree rings being conducted by Dr. A. E. Douglas of the University of Arizona materialize. Dr. Douglas gave a most interesting lecture at Albuquerque on March 12 on the subject of the intensive scientific study he is conducting on this subject. Of course, the Redwoods which were on the job recording weather conditions for geological ages, and with living representatives containing readable records back to the year 1300 B. C., hold the greatest possibilities in this line and are the main species used in the work. Dr. Douglas is working on the known fact that weather conditions run in cycles. The study of these cycles in the redwood rings, a combination of sun spots, astronomy and history, and one has the media through which the solution is being sought. The most practical application of this will be the prediction for a longer or shorter period of the larger aspects of weather conditions. It's hard to conceive of a more practical subject affecting the lives, plans, and happiness of men.

"The fifty-fifth annual convention of the National Wool Growers' Association at Salt Lake City was a succession of thrills, throbs, rapid action. They whacked the Forest Service for the serious reduction of grazing permits this year and immediately afterward vociferously cheered a chief of the Service for his explanation of that reduction."

- From The Country Gentleman.

The local Federal Employees' Union presented to the National Federation of Federal Employees, a strong case for increase in the low building limitation on ranger stations and the desirability of the Federation exerting pressure on this subject when the Agricultural Bill was being considered in Congress. The Federation has spent much effort on this point and we believe has helped a lot in gaining the ground so far indicated in the present status of the bill, namely, a $1,000 limit, retroactive to stations previously constructed.

Another biological atrocity! The Kingman, Arizona, Mineral Wealth, commenting on the fact that the Forest Service is collecting some elk horns for the Biological Survey, gives this ingenious explanation of the use that will be made of them:

"Some question has arisen as to the exact species of elk that were brought from Jackson Hole, Wyoming, and this is to be settled by the biologists of the Department of Agriculture. It is contended that the elk are not the true breed, having crossed with the moose, the norns being flatter and wider than the specie that kept the blood pure."

We nominate this interesting creature (Elknus Kingmani) for a place in the Hall of Fame alongside District 2's famous cross between a deer and a sheep (Phantasmagonius denveri).

Forest Examiner Wilson has adopted a Buick car; likewise Ranger Smith's pet Lizzie has made way for a brand new Lady Elizabeth in the Rincon Ranger Station garage. No doubt the price of gasoline and tires will continue to soar. When Rangers Pigott and Galer have helped on the H. C. L. by investing in a car, only the Supervisor will be left auth-less on the Coronado Forest and a heart-touching requisition is being planned to secure one for him too.

District 3 - Southwestern District (continued)

A tree takes an unmercifully long time to grow from a seedling to a size large enough to throw a good shade. Most men do not live to see the results of tree plantings, but they have created more debtors that come after them than could be counted. Even the ranger's dog 25 years from now will thank you on a hot August day for the shade tree that you put in the corner of the house lot at the station this spring. Anyway, the whole job is for posterity - why not a bit for our fellow worker posterity?

What about the possibilities of trespass cases if we had a regulation in our own National Forest Manual something like the following, which is found in the Algerian Forest Code:

"Art. 121. Any persons found in the woods and forests at night, off the highways and ordinary roads, with bill-hooks, axes, hatchets, saws, or other instruments of a similar nature, shall be sentenced to a fine of 5 to 10 francs ($0.96 to $1.93) and have the aforesaid instruments confiscated. A maximum fine shall be enforced in case of repetition of the offense."

Edgar Allen Poe, master of alliteration, has nothing on this District for that special style of rhythm. How about these?

Kimberlin Carlisle of the Coconino; Christie Crosby of the Coronado; and another, now a bit ancient: Charles C. Carr, Chief Clerk of the Crook.

"Once again Mr. Christy is going to try driving his stulls down Blue River from the forks to Clifton. A large number have been launched for floating. The crew of men is much larger this year than last, with Mr. Gentry again foreman of the outfit, better equipped with tools and chuck. Two men have been assigned to blast out the Box above Cosper's rach, as at this point last year a jam held up operations for a week."

- From the Apache.

"Speaking of trees: We saw an Alligator Juniper the other day which measures 15 ft. D. B. H. By looking around a bit we might find a real tree."

- From the Gila.

"Oscar" the faithful but erratic Forest Service truck on the Prescott Forest nearly perished in a fiery grave while out under the care of Rangers Jahn and Linton. The truck was saved after a struggle during which the gasoline boiled but failed to explode. Pyrene fire extinguishers are strongly recommended for cars on all travels.

We'll back our Gila "Trotzky" against the Prescott "Oscar" any day in the week when it comes to being erratic. "Trotzky" because the blamed thing has so many Bolshevic attributes and because we shall have to print paper money to keep it going.

- From the Gila.

The recent high waters in Roosevelt Lake uncovered a very rare specimen of prehistoric age which was found on a point jutting out in the lake up Tonto way by Supervisor Coddard on March 14. The relic, a piece of pottery, is a one-half gallon jug with very distinctive stripes on the upper portions. It was apparently constructed to resemble some beast of the field or fowl of the air that existed in prehistoric times of which we know very little or nothing except through the overworking of our vivid imaginations. The jug has a body similar to that of a duck, legs, feet, and head, like some kind of an animal, with a tail like a poodle dog or a pig, a beak like a goose and a head like some mammal. It has two ears and two horns. The horns and ears are about the same size and it is hard to detect which was meant for the horns and which for the ears, since one is on the head and the other high up on the neck. It had four legs, and feet with split hoofs. With the exception of one hind leg the specimen is intact and perfect.

District 4 - Intermountain District

The rodent question on the Humboldt Forest has become more serious from year to year, and within the past few weeks an organized campaign against them has been begun by a Representative of the Biological Survey at Elko, Nevada. He has requested each ranger on the Forest to devote a week's time to the destruction of rodents, and will distribute poisoned grain to be used at a time when the best results can be secured. Supervisor C. E. Favre believes that this will enable the Forest Service to make a record for itself in cooperation work when the seriousness of the matter is considered. He has issued a circular letter to his rangers urging them to assist in this campaign and asking them to advise him the amount of poisoned grain each can use on his district. The plan is to allot each ranger at least 400 pounds of poisoned grain to be distributed over the range in cooperation with permittees. If it is impossible to secure the desired cooperation, the ranger will devote a week or so of his time to the work.

"For Sale:- One Ford with piston rings; two rear wheels, one front spring, has no fenders, seat or plank, burns lots of gas, hard to crank, carburetor busted half way through, engine missing, hits on two. Three years old, four in the spring, has shock absorbers and everything. Radiator busted, sure does leak, differentials dry, you can hear it squeak. Ten spokes missing, front all bent, tires all blowed out, ain't worth a cent, got lots of speed, will run like the deuce; burns either gas or tobacco juice. Tires all off, been run on the rim - a very good Ford for the shape it's in." - H. S. Wilson.

Ranger Christensen of the Cache Forest who is busy counting the cattle of his 340 permittees, reports that the cattle on his district are in extremely poor condition, and that the situation is really worse than it was in the spring of 1917. There is also a greater shortage of cattle in that country than was indicated by the grazing applications.

An application was received on March 23 from Caldwell and Richards, engineers of Salt Lake City for a final power permit for the Blue Mountain Irrigation Company. The proposed project involves Pole Creek on the La Sal Forest near Monticello.

Representatives of the War Department have asked our assistance in making surveys and maps of the proposed location for the United States Arsenal at Ogden. It appears that Congress had not appropriated any funds for this building but the War Department wished to secure the maps and surveys at the earliest possible date. They were picking up engineers from the City, State, Bureau of Public Roads, and Forest Service. This office is planning to detail several men to the work for a few days.

Ranger Smith of the Humboldt Forest submits a list of the Indians desiring grazing privileges on the Santa Rosa Division of that Forest. Among the names are the following: "Ox Sam," "Ocho Winnemucca," "Maher Hinkey," "Charlie Missouri," "Minnie Monday," "Fat Peet," "Johnny Soap," "Jake Horse," "Loco Jack."

Ranger Davis of the Cache Forest reports that while making feed lot counts in one community on his district a short time ago, he found one permittee who was particularly anxious to have the calves counted which were outside of his barn, and seemed to be rather nervous and anxious to have Davis move along to another corral to count his other calves and horses. Apparently Davis is of an inquiring mind for he chanced to peek through a crack in the log barn, the door of which was closed. He noted that there were stock inside, but was saved the trouble of making inquiry by one old cow who called loudly for her calf that was on the outside. When the barn door was opened, Davis counted six extra cows to the man's credit or discredit as the case may be. Davis says the man was so mad that he could hardly speak, but it strikes us that there was not much that he could have said anyway. Apparently, a ranger needs to keep both his eyes and ears open when making feed lot counts in some localities.

We read in a daily paper that members of the Boston Window Cleaners Union have made a demand upon their employers for an increase in wages to $44 a week with

District 4 - Intermountain District (continued)

eight hours work and four hours on Saturdays. We have read other and similar articles with regard to street cleaners, etc. It sure pays to have a high calling in life, doesn't it? Some of us are forced to covet a window cleaner's pay check.

The "quite retiring, even unassuming" Mono Forest has no monopoly on comparative figures and statements. The Targhee has a few toots to make on its horn also: - Witnesseth--

In 1911 its revenue was $25,390.87; its expenses $57,168.16.

In 1919 its revenue was $52,833,99; total expenses $33,030.40.

Its income has doubled and its expenses approximately half that of 1911. (Better years could have been selected for comparison than 1911 but it is used here in order to compare the same years as the Mono).

In 1919 the Targhee ranked second in total receipts of District 4, third in grazing receipts, third in timber sale receipts and third in special use receipts.

More tourists and recreationalists visit the Targhee than any other two Forests in the District.

Want any more?

- Targhee Forest.

An article on the "Discovery of Sugar on Douglas Fir" in a recent issue of American Forestry has thrown light on a puzzling botanical phenomenon which occurred last year on the aspen of the Santa Rosa Division of the Humboldt Forest. Supervisor C. E. Favre reports that small crown-shaped objects formed on the leaves, bark, and ground cover, about the size of peas. These exudations were in the form of syrup, were sticky, but had a sweet taste and attracted the bees. The Supervisor believes the condition was occasioned by overwork of the food functioning organs of the aspen during the prolonged dry and hot summer season which existed on the Santa Rosa Division last year. The condition seems to have been peculiar to this division, as it was not noted on the Ruby or Humboldt Divisions.

District 5 - California District

Robert Wells Ritchie, who is writing a novel of the West for the Curtis Publishing Company, was in conference with Mr. Redington recently. Mr. Ritchie wants to build the novel around the work of the Forest Service, believing, and rightly that no novel with a true perspective of our work has been written. He intends to devote his entire time to the work, beginning in April.

Resources and activities on the Arroyo Seco Division of the Angeles
by W. D. Marx.

Area 38,000 acres. Brush, timber, grazing. Annual pilgrimage of 100,000 people; 200 summer homes; 7 resorts; over 3 dozen public camping places. A world famous scenic mountain railroad. A solar observatory. A dozen June 11th claims. Several gold mines. Several timber purchasers. A toll road. A game refuge; 30 miles of roads on Government and private land; 65 miles of trails; 15 miles of firebreaks; over 25 miles of phone lines; 2 sanitariums; 2 castles; several $100,000 homes. A State rifle range. A haunted house. The homestead and grave of a son of John Brown of Civil War fame. A ranger station located on ground where bandits during the 70's are supposed to have buried $15,000. A resident who has lived here 50 years. A road built during the close of Civil War. A white mountain lion. A A thousand fire permits to be issued to campers; 57 varieties of questions asked by campers; 11 different kinds of uses as pipelines, reservoirs, railroads, residences, resort, stage-stations, hotel, telephone line, roads, powerline, agricultural along with some free use. A resident population of approximately 200. Elevations ranging from 1,000 feet to 7,500 feet. Intakes of five separate water companies. A reforestation area; 3 ranger stations, a fine gravity water system for headquarters. A powder magazine and two stream gauging stations.

A fine climate with a view from most any of the high peaks that takes in 2 aviation fields; 1 U. S. Army Balloon school; largest observatory in the world, a scenic mountain railway; 150 miles of the Pacific Ocean and seacoast; 3 separate Forests; 45 towns and cities; 3 islands; 3 lakes; 3 rivers; 3 separate steam railways; 1 electric railway; thousands of acres of citrus fruit and other varieties of fruit orchards, vineyards and gardens and grain lands; 2 colleges; a cemetery; hundreds of miles of macadamized streets and boulevards; 3 golf links; 4 of southern California's most famous hotels. A light-house and two miles of breakwater, the Mohave Desert and vessels traveling the Pacific Ocean; 5 separate oil fields and the headquarters town of a corking good Supervisor.

"We all hear a lot about what makes or breaks a man in the Service. I think the one thing that has more to do with it than anything else is the man's wife. Lots of good men come into the Service and quit because their wives are not satisfied with the work. I think that the Service, in picking its men, should pay more attention to the kind of wife he has. Unless she is willing to get in and help to keep her end of the work up without having all the conveniences of a city home, he had better quit. Give him a wife who will answer the telephone, make out camp fire permits, rustle men for a fire, and he is all right. Like Ranger Marx of the Angeles, I say, 'Thank God for the rangers' wives.'"

Miller is now completing the land classification summary report and it will go to the Forester within a week. With this done, land classification work in District 5 will be a thing of the past.

Although some few mistakes were made in the original work, it is safe to say that, taken as a whole, it is nearer 100% correct than the most optimistic of us believed possible seven years ago. As a matter of fact the general public recognizes that the work was well done and an appealed land case from District 5 is now almost unheard of.

The Modoc Forest has added a real estate business to its already varied list of activities. Public service is often a thankless job, but a letter like the one below proves that it is not entirely without its compensations:

"Received map and letter of March 11 and must say that I am more than pleased over the courteous way you have in your office replying so fully and promptly to those who seek information about Modoc Co.

Have written Mr. Batchell * * * and will take him up, as I am very anxious to live in the mountains. The location of the place offered by other parties does not appeal to me at all, being too far from R. R., postoffice, etc. * * *

Hoping the opportunity will soon present itself to meet you personally and shake hands with you and your Mr. Brown is the wish of -----."

The writer is a middle-aged man with some capital desiring to get away from the city and establish a home where he can raise a garden, chickens, and bees, and still be where he is readily accessible to good hunting and fishing.

District 6 - North Pacific District

On February 10, Mr. Treen made an interesting trip with Mr. Nagayama, Secretary of Forestry for the Japanese Government at Formosa, to the Alaska cedar flat on Pilchuck, to enable Mr. Nagayama to see Alaska cedar growing in its natural habitat. Transportation in shape of a Packard touring car was furnished by a friend of Mr. Nagayama who also made the trip. Considerable logging is being done by the Japanese Government in Formosa. There they have some 50 miles of railroad and go to an elevation of 7,500 feet in order to log coniferous timber.

R. P. Burnham is now employed at the Pacific States Lumber Company's mill at Selleck and appears to enjoy his work very much.

Arthur Kloe, employed for some years on the Snoqualmie Forest, later as scaler on the Columbia Forest, is at present living in Ballard. He has temporarily given up his seafaring work to be at home on account of his mother's illness.

Earl G. Forbes, formerly employed on the Snoqualmie, called at this office recently and stated that he had a position with a logging company at Barneston as Logging Superintendent. Mr. Forbes spent 18 months in service in France and was in the St. Mihiel and Argonne drives with one of the light narrow gauge railway units. During the past summer he has been in charge of a crew locating State Highway in Idaho.

The State Exhibit Agent, aided by the Forest Service, has placed potted specimens of Oregon softwoods conspicuously in a show window of the Oregon Building, Portland, scene of the State Exhibit exposition. It is intended to leave them here until after the Shriners' visit in June, that Easterners may have opportunity to profit by the display. However, it is doubtful if these visitors will have more benefit from it than the processions of Portlanders who look at it daily. The different species are labeled so that passersby may learn the right name for each tree. The exhibit is in plain view from the street, and is arranged pyramidically on semi-circular steps. A western red cedar is at the apex of the pyramid. Among the little trees and in equally plain sight from the street is a printed placard showing the amount of the standing timber in Oregon, the most important kinds, and figures about the value of the Forest resources to the State. The information ends with:- "Exercise care in the woods. Oregon's forests are threatened by fire each season. Burned timber pays neither taxes nor wages. Put out your camp fire." The more important words on the placard are printed in red.

Development work is under way at Zigzag Camp Ground and the adjacent Still Creek and Zigzag Summer Home Areas. These sites lie southwest of Mount Hood and are connected with the Mount Hood Loop Road by a short Forest Service road which, joining with the main highway, encircles Zigzag Camp Grounds. The camp ground is to be arranged to accommodate at least 5,000 people, not necessarily at one time but in the course of the season, and will have fireplaces, parking places, running water, side trails, and other improvements. It is expected that in the near future Mount Hood Loop road will make Zigzag generally accessible, as the route has been surveyed and cleared. The distance from Portland to Zigzag is about the same as from Portland to Eagle Creek, and it is thought that Zigzag will vie with Eagle Creek in popularity, although they meet different needs. People more frequently pause at Eagle Creek for a picnic during their ride along Columbia River Highway, or for coffee after a hike over the trails that lead from the camp grounds than for a longer sojourn. At Zigzag longer stays are made in order to get full benefit of the mountain air and fishing.

After 29 years of exposure on the roof of a house in the Puget Sound region, Douglas fir shingles - torn off finally in the process of enlarging the house - have been found apparently as good as new.

Reports of salmon waste in Alaska have again reached this office. This time they came from Alaskan fishermen visiting in Seattle, who have told the facts to Forest Examiner Asher Ireland. Mr. Ireland estimates these men represent 75% of the salmon men in Alaska.

This season "kings" only are to be canned. "Humpies" (or humpbacks), chums, and dog salmon, hauled up in countless numbers with the kings, will be lost even to the natives or as fertilizer, since all these culls are dead by the time the kings have been extracted and plants and labor are lacking to convert the dead fish into fertilizer. Americans will eat only pink-meat salmon (Alaskan kings or Columbia River Chinook). During the war all the salmon caught were canned, with the result that an abundance of white-meat salmon (humpies, chums, and dog-salmon) remains undisposed of.

Those men from this District who had the good fortune to go to March Field, Southern California, for the month's work in wireless and as airplane observers, say that they benefited noticeably by the training and from the conference as well. The training consisted of radio buzzer work; theory and operation of wireless; airplanes; theory of flight in heavier than air machines; different types of ships, their limitations, and what may be expected of the pilot; first aid, map reading and sketching; meteorology; photography; carrier pigeons; etc. Each man had one flight and practical experience with the wireless. In all modesty, the men who were there report that District 6 made a good showing.

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

April 19, 1920.

Colonel Graves Says Goodbye

Almost exactly twenty years ago a small group of men gathered in Mr. Pinchot's house in Washington to discuss the question of the expansion of the forestr movement in the United States. At that time I was assistant chief of the Division of Forestry. One of the immediate results of the conference was to take me out of the Government service to aid in building up the profession of forestry for the tasks we saw were ahead of us. The largest issue at the time was the expansion of the system of forest reserves, as they were then called, and the introduction of the principles of forestry in their administration. Within a few years the way was open to attain these objectives, through the transfer of the forest reserves to the Department of Agriculture and the creation of the Forest Service.

Upon the foundations laid in those early days we have built a profession of forestry. In connection with the National Forests and the other forest undertakin in State work, educational institutions, and elsewhere, foresters have been placed throughout the country in responsible work. In the National Forests alone men were placed at hundreds of points and given charge of public property and of introducing in practice the principles of forestry, often in the face of great local opposition that resented every idea of permanent public control of the Nation's property.

Probably few men at the beginning had a realization of the scope of the ne undertaking or its meaning to the country. Starting oftentimes from the viewpoint merely of tree growth and the furnishing of industrial products, our young foresters quickly found themselves engaged in a gigantic public enterprise that affected the welfare of thousands of communities, innumerable industries, hundreds of thousands of people in homes, and that touched the very basis of the prosperity of the whole natio

Previously the old Division of Forestry had had no responsibility over the public forests. It had been preaching the doctrine of protection, silviculture, good utilization, and so on. Now the foresters were given charge of a vast domain of land to handle in the permanent interests of the public. They had now the opportunity an duty to put their doctrines into practice. Quickly there was revealed to them the relationship of the forests and the use of their resources to the immediate industri and social welfare of the people, more intimate and more far reaching than most of th had realized. They found that the forests were not merely groups of living trees that could be used for various industrial purposes and for general protective benefits; th found that a forest was something much larger and more important, containing many oth resources whose use, coordinate with that of the timber, is an essential part of the whole complex industrial system, and that rightly used, the forest will contribute t the building up and sustaining of their regions and become a basis for national stren and prosperity.

The vision of opportunity in the Service made of every man a fighting pioneer on the frontier of forestry, eager to demonstrate what contribution the resources of the forest could make toward the permanent welfare of the whole region and of the nation.

It was a new principle in the history of public undertakings in this country that our public lands should be held and devoted permanently to the service of the public. A new ideal of efficiency of Government administration was introduced and carried forward by a small band of devoted public servants, actuated by the sole purpo of service and helpfulness.

The undertaking succeeded because the principle was right. Also, it succeeded because of the initiative, the courage, the persistence, the hard work, the devotion and efficiency of members of the Service. Not only did the Forest Service succeed in proving the principles of national forestry and in making the National Forests permanent, but it also introduced a new spirit and a new viewpoint in public matters throughout the West. It established new standards of public service that have influenced scores of other field organizations. This may be stated without any failur to recognize the services of other Government organizations like the Reclamation Servi and various bureaus in our own Department, whose members were stimulated by the spirit and example of the great leaders Roosevelt and Pinchot. But to the pioneer work of th Forest Service is due the recognition of the principles underlying conservation in a

Colonel Graves Says Goodbye (continued)

very wide field far beyond the scope of forestry.

A short time ago I was reading a book on conservation by a professor of economics in one of our large universities. Several pages were devoted to the questio of why the conservation movement had not been led by economists. It was shown that economists had in books, articles, and addresses, previously emphasized the principles underlying conservation. Yet it took the foresters, not the professional economists, to crystallize the principles of conservation into a movement and get it into practice It took the foresters to go into the field and to overcome both the inertia of laissez faire and the opposition of the special interests of exploitation and speculation. The foresters achieved their objective through practical demonstration. They proved their principles by actually making the communities in which the Forests were located better places to live in, by developing the country, by stabilizing and making permanent many industries.

The members of the Forest Service have been actuated by high ideals, but they have been successful because they have also been leaders of men and have had initiative and courage to get their principles into practice in spite of innumerable obstacles. There has been among the members of the Forest Service a very general readiness to look facts squarely in the face, to recognize the truth even though that involves a recognition of mistakes. There has been a readiness to make changes where needed and to adopt new ideas even if they are the ideas of others, when really convinced that these are right. But above all, there has been both a courage of conviction and a readiness to go forward with definite action promptly and effectively. When a unit of the organization is convinced of the wisdom of a certain action, the conclusion is quickly reached, "Let's go and do it;" and the Forest Service succeeds because the men are willing to go and do it without counting the cost and without stopping for any obstacles. There is a phrase which was often quoted among the engineers in France during the war: "The scientists said it can't be done, but the damn fool engineer didn't know that - so he went ahead and did it." That is something of the spirit which has actuated the Forest Service and has differentiated the organization from among others whose purposes and ideals are the highest but who have not had an equal success in getting things done.

In leaving the Forest Service after ten years in charge of the work, retrospect is natural; but my tendency is to look back over the past primarily with the view of measuring our achievements in their relation to the tasks which remain still to be done. My own experience during the last decade has been one of constantly widening conception of the service of forestry, a better appreciation of its larger problems, and a clearer vision of the great principles which we have only just begun to develop. My thoughts dwell not merely upon the magnitude of our present system and its immediate problems, but upon a larger and more widely extended National Forest system, upon a balanced program of forestry that does not fall short of bringing under good forest management all the private lands of the country, and all that this means to the welfare of every community, to the State and to the Nation. My thoughts dwell, too, upon the extension of our principles to the policies of our nation with reference to other resources whose right handling is essential as a basis for our future industrial prosperity.

The world sees today the bearing great sources of raw materials have upon national development, national stability, and international peace. Yet we go on in this country, blundering in our land policies, failing to give any adequate heed to our national recklessness in wasting our natural resources, stubbornly refusing to face facts and the dangers that are bound to follow our own improvidence, deluding ourselves with the idea that we shall still continue to have an abundance of raw materials of all kinds.

The foresters deal, it is true, with growing trees and with producing board for industrial use, but they are concerned also with the handling of the lands that comprise about one-third of our whole country and they inevitably must deal with vast problems of industry and the social well-being of millions of people dependent upon these lands. The foresters are promoting principles that apply so widely that there is hardly a question of national economy that is not involved in our work.

For myself, I am not dropping the work that has been the single purpose of my life. While my future plans are not yet definitely determined, I look to the opportunity during the remainder of my active service, to render a contribution to forestry that I hope may prove larger than what I may have accomplished heretofore.

It is indeed hard to sever my connection with the Forest Service, to leave

Colonel Graves Says Goodbye (continued)

the close relation to its various problems, the plans ahead, the incomplete enterprises, the unfulfilled needs. It is especially hard to sever the relationship and touch with the members of the organization. My association with them has developed a deep personal regard for them and a pride in their splendid work that I can not express. The cooperation and support that has been given me in carrying out our plans the initiative and independent thinking and acting have been a source of great gratification to me. The spirit of loyal helpfulness that has been shown throughout the organization I appreciate with real gratitude.

I feel that I have chosen the right time for leaving the Service, inasmuch as I was convinced that it was my duty to take that action. Of greatest importance, of course, is the fact that we have had men competent and fully qualified in the Service to take up the succession and carry on the work. It is peculiarly gratifying to me to leave my own work in charge of Colonel Greeley and that Mr. Sherman has been chosen to succeed Mr. Potter as Associate Forester. This means that the Service will be directed by men who have intimate knowledge of the details of the work, and whose executive ability, personal leadership, and spirit of public service have been demonstrated over and over again.

So far as I am concerned, my departure will be chiefly a change of relationship, and I believe that we will continue to go forward shoulder to shoulder in this struggle towards the big things that are so well worth while.

H. S. GRAVES.

Secretary Summarizes Colonel Graves' Work in Forest Service

The following letter was sent by Secretary Meredith to Colonel Graves, upon receipt of the latter's resignation:

"March 24, 1920.

My dear Colonel Graves:

Your decision that you can not, in justice to yourself, continue longer at the head of the Forest Service is one which I have received with the deepest regret. I am compelled to accept it, much against my inclination, because I can not, in fairness to you, do otherwise. The loss of your services, however, is a matter of great moment to the Department of Agriculture, as well as to the public interests which you have so effectively protected and advanced; and I sincerely regret that I shall not have the benefit of your counsel and experience as Chief Forester during the remainder of my term of office here.

The decade through which you have guided the Forest Service has been notable in accomplishments, and the organization which you have developed to a high plane of efficiency has won not merely the sincere respect but the hearty approval of the West, which is perhaps most directly interested in it, as well as the country at large. More and more you have made the National Forests serve the public welfare. Their usefulness has been expanded along lines which make the most of their productive resources, scientifically yet practically, and always with a sound, far-sighted public policy. You have seen to it that they are utilized in helping the home-builder, in promoting local prosperity, and in contributing largely to the benefit of the people as a whole. Thus you have given stability and permanence to the public forest enterprise - which means true development as against destructive exploitation. You have handled the public resources in the interests of the many as against encouraging or permitting monopoly by a privileged few.

You have put the handling of the public forests on a thoroughly business-like basis, from every standpoint. Under severe handicaps and discouragements of a kind unknown in private business, you have secured an admirably trained personnel, developed a system of administration which I believe to be unsurpassed in effectiveness in any branch of the Government, and conspicuously stimulated, by leadership, a spirit of loyalty and devotion to the interests of the public in your organization. At the same time, you have recognized that the work must be based on technical knowledge - that the public welfare must be served by experts and specialists, just as private business is, if public ownership and management of the great public properties under the jurisdiction of the Forest Service are to meet with the highest degree of success. You have, therefore, emphasized the importance of scientific research and of the application of

Secretary Summarizes Colonel Graves' Work in Forest Service (continued)

its results in the business of administration. The progress made under your direction in the development of the basic knowledge of forestry and in its practical application has been no less signal than the progress made in the building of an efficient organization and the working out of good business methods.

You have also carried to substantial completion a great work of land classification, based on sound principles which it became your duty to formulate; so that large areas, in the aggregate, of agricultural lands have been opened to acquisition and conversion into farms, while the lands suited to permanent public ownership and administration for forest purposes have been classified as such - a step in itself of utmost significance for the permanence of the communities and the resources in question.

On your initiative primarily, a policy of road building for the development of the National Forests and the benefit of the public has been entered upon. During the war you not only brought your organization through intact and enabled the National Forests to contribute up to capacity to the war effort of the country, but you employed it extensively in the location of forest supplies of war materials and in the solution of important research problems relating to wartime uses of forest products. You assisted largely, both in person and through the release for foreign service of many of your best men, in solving the problem of wood supplies for the American Army in France. Within the last few months you have taken the lead in a movement, which I believe to be of the utmost importance, for extending the practice of forestry to lands now privately owned and stopping the needless and short-sighted waste of a great basic resource through forest destruction.

These are large services. By wise judgment, energy, vision, and untiring devotion you have rendered them to a degree that has been and is the pride of all your friends. They entitle you to a large measure of gratitude from the public, to whom they have been rendered, and you may justly be proud of the record you have made.

During the time that I have been here I have thoroughly enjoyed my association with you. Whatever may be your plans for the future, you have my best wishes for complete success in any undertaking in which you may engage. I know you are not going to lose your interest in the forestry problems of the Nation and that the Department and the Forest Service will have your cooperation and counsel in the discharge of their responsibilities for the maintenance, development, and sound utilization of our great forest resources.

Very sincerely yours,

(Sgd.) E. T. MEREDITH

Secretary."

A "Close-up" of Albert F. Potter

To the majority of the men and women in the Forest Service Mr. Potter's resignation is more than the mere severing of official relations. With all of us it means a personal loss, coming at the end of almost twenty years of official and intimate contact.

Previous to the year 1897 a number of what were then called "Forest Reserves" were established in Arizona. They were not, however, placed under administration until the passage of the Act of 1897 which authorized the Secretary of the Interior to administer them in accordance with the law. From the very beginning of this administrative action the Arizona stockmen were uneasy as to their status. This was true especially of the sheepmen who knew of the wholesale eviction of sheep which was taking place on the Forest Reserves in the high Sierras in the State of California.

Accordingly the stockmen generally organized themselves for the purpose of fighting this new propaganda with an idea of protecting their interests. In the fall of 1898 the sheepmen of northern Arizona organized an association with Mr. Potter as secretary. In the winter of 1898-99 in company with the president of the association, Mr. Potter went to Washington and spent several weeks in consultation with Government officials on the question of the use of the National Forest ranges by livestock. During this visit Mr. Potter made the acquaintance of Mr. Pinchot and Mr. F. V. Coville.

A"Close-up" of Albert F. Potter (continued)

Early in the summer of 1899 these two gentlemen went to Arizona where they spent the entire summer in investigating the forest ranges in that State, taking Mr. Potter with them as guide, adviser, and general all-round stockmen.

In the winter of 1899-1900 Mr. Potter and the president of the Arizona Wool Growers Association again went to Washington for the purpose of securing further concessions for the stockmen. At that time there were two different departments handling forestry matters -- the Bureau of Forestry connected with the General Land Office of the Interior Department, and the Division of Forestry in the Agricultural Department. This latter division, Mr. Potter says, was housed in two small rooms on the third floor of the small red brick building now occupied by the Secretary of Agriculture. Here Mr. Pinchot found Mr. Pinchot in charge, together with Messrs. Price, Sudworth, Graves, Hall, Foley, Ralph Hosmer, Toumey, Luebkert, Fritz Olmsted, Tom Sherrard, Henry Grinnell, Anderson, Mrs. Crocker, Miss Seaton, Miss Allen, and Miss Harrison, who with one or two others whose names cannot now be recalled, composed the entire office force of those early days.

As a result of the pleasant relations formed and the experience gained during these two visits to Washington, Mr. Potter went back to Arizona, sold his sheep and ranches, returned to Washington, and on October 27, 1901, was appointed a Grazing Expert in the Bureau of Forestry of the Department of Agriculture, then housed in the Atlantic Building. He was made Forest Inspector in 1904. The Forest Reserves were transferred to the Department of Agriculture in 1905, and in 1906 he was appointed Inspector of Grazing in the present Forest Service. In 1907 he became Assistant Forester, and when Associate Forester Overton W. Price retired from the Service in 1910, Mr. Potter was appointed his successor.

During the first 3 or 4 years of his work in the Washington office Mr. Potter spent the major portion of his time in the West investigating and reporting on areas under consideration for National Forests. He was also constantly in attendance at meetings of stockmen held at different points in the West, where his patience, ready answers, and tactful handling of the situation always made friends for the Service. Thus he became intimately acquainted with every portion of the West and with its people, not only from the forester's but also from the stockman's point of view, an acquaintance which enabled him to grasp the complex problems which the grazing of livestock offered to the newly created Bureau and which required a man not only experienced in handling range stock of every kind, but also with tact, good judgment, and ability to appreciate the other man's side of the case. Few men in the Government service have had the close acquaintance and friendship of as many active stockmen as Mr. Potter.

Determined to more fully equip himself for his new work Mr. Potter, under the tutelage of Mr. Pinchot, took up a course in forestry, following it closely for two or three years, after which he submitted himself to Mr. Pinchot for an examination which, according to Mr. Pinchot's own statement, he passed with full credit to himself and his instructor.

Every member of the Forest Service is fully conversant with Mr. Potter's work in the Service. The years which he spent with us have been years of achievement, the results of which will always be a monument to his resourcefulness, tact, and far-sightedness. No forest user ever came to Mr. Potter with a just cause but that he found a sympathetic listener ready to adjust the difficulty, even at the cost of reversing his own personal decisions. No one could see possible future complications in correspondence or publications more quickly than he, and his adroitness and success in meeting and overcoming apparently unsurmountable obstacles was remarkable.

Mr. Potter was born in Amador County in the State of California in the foothills of the Sierras, near the little town of Auburn. While he was quite young his parents moved to San Francisco where he lived, attending the public schools, until he was about fifteen years of age, when he entered into business in that city. Owing to ill health he was obliged to give up his position and went to Arizona in 1884 with the idea of engaging in the cattle business and at the same time building up his physical condition.

A few years of life in the open gave him back his good health, the while he was experiencing all the "ups and downs" of cattle raising on the open range in those early days, the "downs" being far more plentiful than the "ups." With the huge expansion of the cattle industry in northern Arizona came the evils of overstocking and the big "die-off" of 1893 left him, as it did many others, with a good constitution, half a dozen saddle horses, a recorded brand, and a few living members of his herd scattered over a range so large that, as he once expressed it, "I was two years finding out how badly 'broke' I was."

With his usual good judgment he sized up the situation, traded off his "chaps", cowboy saddle, and high heeled boots for a sheep herder's outfit, bought a bunch of "woolies", and embarked in the sheep business, in which he prospered amazingly.

Also he ventured into the political game, coming out of it on a "50-50" basis, being elected once and defeated once.

Thus he brought to his new work a varied experience, cowman, sheepman, and politician, all vitally necessary to success in his work of placing on a solid basis the grazing use of the range within the National Forests.

Having fully earned a holiday, Mr. Potter now retires from official life without any plans for the future except to enjoy to the utmost his freedom from all official worries and troubles. He will make his home with his brother Fred at his residence in Los Angeles, California, where with half a dozen autos at his command, we shall no doubt soon hear just how quickly a high powered machine can find its way from San Diego to Siskiyou. If any such records a re broken in the Golden State during the next year we shall look for Mr. Potter's name at the head of the list, or else in the mortuary reports.

W. C. BARNES.

Stag Dinner to Colonel Graves and Mr. Potter Reveals Optimism About Outlook

Foresters may come, foresters may go, but the Service goes on. There is nothing the Forest Service can't do. Firm faith in our future; undaunted belief in the ability of the Service to carry on in the face of all obstacles; resolute determination to keep the faith and uphold the principles established by the men who have made the Service what it is -- these are the things which must have been impressed upon even the most confirmed pessimist had any such attended the stag dinner given by members of the Washington office to Col. Graves and Mr. Potter on the night of April 13.

There were no set speeches. Instead, men who saw the beginnings of the Service, who helped formulate the policies that have been followed and who have watched the Service grow from a mere handful of men in two rooms to its present size, waxed reminiscent and told of the problems that were met and how they were overcome. There was confidence in these talks - confidence that comes from a knowledge of work well done; confidence as to the future of the Service; the same jaunty confidence which enabled men in the early years to make steady progress in the face of tremendous opposition and kept the opponents of the Service wondering what those men had up their sleeves. With the confidence there was apparent the old disregard for hardships and discomforts, the willingness to accept big responsibilities, tackle big things, and stand by the guns under fire, that has made the Forest Service what it is.

The talk, however, was not all of the past; there was no sob stuff about the good old days that are gone forever. On the other hand, "Where do we go from here?" was asked and answered half a dozen times or more and the answers, boiled down, were all the same -- "We're going full speed ahead." There was no doubting the deep set conviction that big things are in store for forestry and the Forest Service - that the next few years will tell a tale that no man would believe now; that the Service is driving on steadily and surely, gaining strength, getting results, and setting an example to the country of unparalleled efficiency, enthusiasm, and devotion to a cause.

The talks strayed into many channels and disclosed much of the unwritten history of the Service. Obituaries of Col. Graves and Mr. Potter were noticeable by their absence. "Fritz" Olmsted told how he started in as a surveyor, fell into the Geological Survey, met "G. P." fishing down at Biltmore, and over a mess of bacon and beans decided to become a forester. "Chaucer" Sherman (as he was and is known

Stag Dinner to Colonel Graves and Mr. Potter
Reveals Optimism about Outlook (continued)

at Ames), the new Associate Forester, explained how his study of the early English poets has helped in the preparation of official correspondence. Regarding the retirement of Col. Graves and Mr. Potter, he told a story of a man on the staff of the New York Herald, who, when he heard that that paper had been taken over by the Sun, threw down his pencil in disgust and said, "I knew that when I took this job 43 years ago it wouldn't be permanent."

"Pete" Peters, "Dol" Smith, "Nick" Carter, Franklin Reed, Will Barnes, and Bob Stuart told many incidents more or less intimately connected with the growth and development of the Service and the problems that were met and overcome. "Jimmy" Jardine related his early experiences in grazing investigations and spoke of the difference in the productive capacity of black and white sheep. Ask him about it some time.

Oscar Merrill spoke briefly on engineering efficiency as applied to the Forest Service. Earl Clapp got in a little publicity for Research and the Madison Laboratory.

Mr. Potter struck the keynote of the evening when he said, "There is nothing the Forest Service can't do. Men who have fought together and smelt powder together are friends thereafter as long as they live. That is why there has always been such a fine spirit in the Forest Service. The Service has always thrived on a fight. We've had a hard fight and we've got another ahead, but we'll win, by jingoes, you bet we'll win!"

What has been done in forestry thus far has been only a beginning, Col. Graves said. The big development is ahead. It will come in the next few years, sooner than most of us believe and it will be bigger than any of us now have any idea. The question of conservation is one which affects the whole world. We now have the spectacle of nations squabbling and fighting over natural resources that are poorly protected and who are anxious to rush in and skim off the cream just as private individuals have done in this country.

The Forest Service has led in the conservation movement and it must continue to lead. The Service is better known than some of us realize and there is a general confidence in the Service that speaks well for the impression its men and its work have made.

"If the present personnel were wiped out down to the last man the Forest Service would live on," Col. Graves declared. "It has made a name and a place for itself that cannot be forgotten and it has made that name and that place because its men have put service above self interest. They have had the courage to fight against big odds for the things they believed in. You can't beat men like that. And I tell you that that old fighting spirit still lives and always will live. It has won victories for the Service in the past and will win others in the future. It is the thing that has distinguished the Forest Service from all other Government bureaus and as long as we keep it we're going to be able to put over things that no other bureau could possibly do."

Farewell Function to the Foresters

The members of the Washington Office entertained Colonel and Mrs. Graves and Mr. Potter at the Washington Club on Wednesday, April 14, at a reception, dance, and card party, as an expression of their friendly appreciation of the long and pleasant relationship which has existed between the office force and the retiring officials. In addition to the guests of honor, Colonel and Mrs. Greeley and Mr. and Mrs. Sherman were in the receiving line, linking the new regime with the old.

Shortly before nine o'clock more than two hundred people filled the charming rooms of the clubhouse and extended their personal farewells and good wishes. Mr. Claude M. Ballard made the introductions.

After the long line of well wishers had passed the receiving party, each of the departing officials was presented with a memento of Forest Service days. In a graceful little speech Mr. Herbert A. Smith, on behalf of his associates, presented a beautiful picture of a bit of National Forest woodland to Colonel Graves, as a "constant reminder of the trees he grew." Mr. Will C. Barnes, with a few witty remarks, made the offering to Mr. Potter -- a looseleaf album containing a good wish in verse, drawing, or quotation, from each member of the Washington Office.

The reception was significant of things that do not appear on the surface. It was much more than a social occasion; more even than a farewell to a chief and assistant chief whom the members of the Service hold in high honor and affection, and whom they take leave of with the greatest regret. It was a n expression of a sense of comradeship in an organization to which we are proud to belong, an expression of the spirit that helps make the Forest Service what it is -- that knits its members together in a common purpose instead of merely assembling them for a common task. All who attended will long remember the evening as a notable event.

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

April 26, 1920.

The Man and the Job

The first concern of the Forest Service is the men and women who compose it and their attitude toward their jobs. Without a strong personnel with the right outlook toward the work, it is fruitless to attempt to forge ahead in our technical methods or our policies for the development of the National Forests.

The greatest achievement of the first Forester, Gifford Pinchot, was the attitude toward their work which he put into his men. Mr. Pinchot brought together a force of cow-punchers, lumber-jacks, and college boys, few of them well trained and practically all of them inexperienced; and made out of them in a few years the most effective public service ever seen in the United States. He made these men take their work to heart and accept an individual responsibility for carrying the Service forward. Down to the temporary fire guard, they felt the thrill of the high ideals of public service inspired by their leader. The Forest Service became a fighting organization. It put things across. It throve on obstacles. It has attained one stag after another only to pick out a new goal further ahead and press on to reach it.

Under the admirable leadership of Col. Graves, the Forest Service has retaine this quality as a fighting organization to which nothing is impossible. That is the chief reason why most of us are in the Forest Service today. And among the things which I hope to accomplish I put this first and foremost: that we may keep our fighting edge, our sense of individual responsibility, our spirit of initiative, and our vision of serving the public.

It goes without saying that this is not easy, particularly under the restlessness following the war, the upsetting of old standards, and the lagging of Government compensation behind both the purchasing power of the dollar and the intrinsic value of expert work done by experienced employees. Its difficulty is emphasized by the rat at which men are quitting the Forest Service; but notwithstanding these discouragements the task can and must be accomplished.

The Forest Service probably can never offer to its employes financial compensation equal to the real value of their services on a par with commercial employment. The best that we can hope for will not overtake the scale of salaries which a large porportion of Service men would command on the outside. The Service, however, does offer other forms of compensation. It offers personal responsibility which brings out the best in men. It offers stimulating and interesting work which keeps men alive and out of ruts. It offers an open road to opportunity. Few organizations, public or private, give their employees a training in executive work equal to that of the Forest Service or bring out individual capacity so quickly. It offers new and large problems to be worked out. There are as many of these ahead of us as behind us; I will outline a few of them in another issue of the Bulletin. It offers opportunities for serving the public that are unexcelled, both the interests of Nation and State and the everyday welfare of the National Forest community.

In these things the men in the Forest Service have found and will continue to find their greatest compensation; the satisfaction that comes, not from a fat pay envelope, but from the consciousness of having done something worth while. The men t whom such compensation appeals must, however, face the facts.

I can not and do not urge the men to whom financial opportunity makes a strong appeal than the Forest Service has to offer, the men who are restless and looking f outside employment, the men who in justice to their families must obtain higher compensation, to remain in the Forest Service. If they remain, we have the right to expect that they will give the Service the best that is in them, not only in personal work but in the spirit of steady optimism that is essential to effective effort and leadership. If they are not prepared to accept the disadvantages and uncertainties of the Forest Service for the sake of the opportunities which it places within their reach I frankly believe they had best seek other employment better suited to their personal requirements. Common sense commends such a course; and the admirable relations which

The Man and the Job (continued)

have always existed between the Service and its men dictate that it be taken with mutual good will, helpfulness, and respect. We need no walk-outs to convince the Secretary of Agriculture or Congress of the necessity of revising our salary schedules. But the men who do not feel themselves held by what the Service has to offer or whose personal situation compels a change had best go.

Every one of us who stays with the organization owes the Service the best that he has, in loyalty and in brain power. If the men who elect to stay give that kind of service, if we can fill up the ranks with young recruits, inexperienced though they may be, who will tackle their jobs with the enthusiasm and initiative traditional in our force, we can carry on and ahead even if the total of resignations is large.

On the other hand, the Forest Service has very definite obligations to the men and women who accept its limitations and put through its work in this spirit. We owe it to accomplish out utmost to bring the scale of compensation as close as we can to the actual value of the work done under present living conditions. I can make no promises in this regard beyond assuring you that this is the one subject which engrosses the attention of the Forester and his immediate associates more than any other, and that no opportunity to bring about a just recognition of our organization will be lost.

The Forest Service also owes it to its employees to give them individually opportunities for initiative and personal accomplishment, to place upon them the full measure of responsibility of which they are capable, and to enable them to advance in technical or administrative work as their capacity grows. Responsibility makes men, and I am anxious that our work shall be so organized that specific responsibility will be carried right down the line by every member of the Service. We must also recognize as one of the obligations of the Service to provide for the systematic training of our own men in administration, in business methods, and in technical work. We can not perhaps pay our members what they earn; but we can make Forest Service work a career of opportunity, of stimulus, and of training in responsibility.

Above all, let us keep the smiles on our faces and an environment of hopefulness and confidence in our work.

W. B. GREELEY,

Forester.

"Ranger, Ranger," says the Stranger, "How does your Timber grow?"

"How fast does timber grow?" is a question which all of us have been asked innumerable times and one which we have had to stall off in various ways for lack of specific information. The results of re-measurements of sample plots on six of the California National Forests, however, give some information which indicates the rate of growth in various cutover stands. These figures indicate that white fir is the fastest growing species of those in the various sample plots with a minimum annual percent growth of 1.52 on the Tahoe Forest and a maximum of 8.1 percent on the Sierra. Sugar pine is second with a minimum of 1.03 percent on the Stanislaus and a maximum of 5.4 percent on the Sierra. Jeffrey pine on the Tahoe had a growth of .95 percent, and yellow pine ran ged from 1.05 at Feather River to 3.4 percent on the Sierra. Douglas fir records on the Plumas show a growth percent of 1.18 and 2.17. Incense cedar varied from .86 percent at Feather River to 3.07 percent on the Sequoia.

By annual growth percent is meant that percentage of the total volume of trees of given species in the stand which is represented by the average annual growth in volume of those trees.

A comparison by forests indicates that the slowest growth was found on the Tahoe where a stand of 29 M board feet per acre produced 310 board feet per acre per annum, or 1.07 percent. The Feather River plots on the Plumas showed 240 board feet increment on a stand of 20 M per acre, or 1.21 percent; the Stanislaus, 324 board feet increment on a stand of 23 M or 1.38 percent; the Portola plots on the Plumas, 155 board feet increment on a stand of 10M per acre, or 1.57 percent; the Sequoia plots, 344 board feet increment with a stand of 11 M board feet, or 3.03 percent; and the Sierra plots, 400 board feet, with a stand of 11 M board feet, or 3.6 percent. In other words, these stands are putting on a thousand board feet in periods of 2 1/2 to 6 years, and will double in volume in from 30 to 90 years.

Receipts Show Steady Gain

A statement of National Forest receipts for the period July 1, 1919, to March 31, 1920, shows a total gain over the corresponding period of last year of $477,216.35. All districts with the exception of District 4 show an increase in receipts. The largest increase was in District 5 where it was $163,081.84. District 4 shows a decrease of $15,502.41 as compared with last year.

Sir William Schlich Retires.

After nearly 55 years spent in the practice and teaching of forestry, Sir William Schlich has retired from the professorship of Forestry at Oxford. In commenting upon his retirement the "Indian Forester" says:

"It is no exaggeration to say that to Sir William Schlich, far more than to any one other man, the Empire owes the development of forestry within its limits. Heavy though his duties were when he started work at Coopers' Hill, Sir William found time to inquire into the condition of forestry in the British Isles and he prepared a report about thirty-two years ago in which he made recommendations for the management of the forests and forestable tracts of the United Kingdom and Ireland which, had they been adopted at the time, would have materially ameliorated the situation that faced the country in regard to timber supplies during the recent war. It is an open secret that the scheme now accepted for the development of British woodlands is, to all intents and purposes, this scheme of thirty-two years ago.

"In addition, Sir William prepared working plans for a number of woods, both state and private.

"The Indian Imperial Forest Service at this moment contains hardly half a dozen officers who have not been trained by Sir William Schlich, and there are students of his working throughout the Empire as well as in some foreign countries.

"It would take far too much space to refer even briefly to all Sir William's achievements. His 'Manual of Forestry' is still the standard work in the English language, and in recognition of his scientific attainments he was made a Fellow of the Royal Society in 1906, the only Fellowship awarded for forestry.

Sir William has the satisfaction of seeing the organization of forestry in Great Britain taken in hand before his retirement, and of knowing that the policy he urged for so long and did so much to foster is at last receiving due consideration."

Lumbermen Discuss Forest Policy

At the annual meeting in Chicago on April 20-22 of the National Lumber Manufacturers Association, a new Forestry Committee was appointed with Geo. S. Long of Tacoma, Washington, as Chairman. E. T. Allen delivered the chief address on the forestry extension movement and received careful attention. He stated that the Western Forestry and Conservation Association, representing 15,000,000 acres of timber land ownership, had endorsed the principles of the Forest Service program, and emphasized the idea that that program provides for State control with Federal assistance. E. E. Carter and O. M. Butler represented the Forest Service.

WASHINGTON NOTES

"Bob" Stuart Resigns.

Major R. Y. Stuart, Forest Inspector of the Western Division of Forest Management, and a member of the Forest Service since 1904, has announced his intention of resigning in order to accept a position as Deputy Commissioner of Forestry of Pennsylvania. No date has been set by Major Stuart when he will leave the Service and he will stay with the job until his successor, who has not yet been announced, has time to get broken in.

Major Stuart entered the Forest Service as a forest assistant in Forest Management in 1906, and was sent out to help Mr. Sherman, who was then, as Major Stuart puts it, "Supervisor of half a dozen Forests around Missoula." In 1907 he was promoted to Forest Inspector, and in 1908, when the Districts were created, he was made Assistant Chief of Operation in District 1. In 1910 Major Stuart succeeded . H. Cooper as Chief of Silviculture and in 1912 was transferred to the Washington ffice as Forest Inspector. With the exception of almost two years spent in France, e has occupied that position ever since.

Major Stuart has a record of consistent achievement in the Forest Service that forecasts success in his work in Pennsylvania. His wide experience in organization atters and thorough knowledge of silviculture and timber sale methods will undoubtedy do much toward making the Pennsylvania Forest Service exceptionally efficient.

Washington Notes (continued)

The Secretary has approved the appointment of E. E. Carter as Assistant Forester in Charge of the Branch of Management.

C. H. Flory, Superintendent of Alaska Forests, has been in Washington for several weeks arranging for the transfer of boats from the Navy Department to the Service for use in Alaska.

Colonel Greeley recently held a conference with Director Mather of the National Park Service in which he made an effort to reach some basis for a closer touch and better cooperation between the two Bureaus. Colonel Greeley made it plain that the Forest Service intends to stand squarely on the principles it has outlined regarding the creation of National Parks out of portions of National Forests, but suggested that when any question arose that the two bureaus should arrive at some agreement before legislation is introduced. This would prevent giving the impression that the Forest Service and the National Park Service are constantly scrapping and would make it easier to secure the establishment of new parks.

A movement has been started in Washington by Dr. Rosa of the Bureau of Standards to form a "Federal Executive association," the membership of which would be limited to persons in responsible executive positions in the Government service. A committee has been appointed to formulate a definite plan and it is expected that the organization will be effected some time in the near future.

Forest Products Laboratory Notes

Sigmund Saxe of New York was a visitor at the Laboratory recently. Mr. Saxe is interested in waste pulp-mill bark as a source of tannin.

D. P. Tierney, Assistant State Forester of Minnesota, paid a short visit to the Laboratory for the purpose of getting acquainted and looking up information on various phases of the work which are of interest to his organization. According to Mr. Tierney, the State of Minnesota now has about 370,000 acres of State forests and a start is being made to organize and handle them in accordance with the principles of good forest management.

District 1 - Northern District

Major A. F. Fenn, Assistant District Forester in Charge of Lands has, at his own request, been relieved of his duties in the District office. He will not, however, sever his connection with the Service, but will handle special lines of work for which his long training and experience have especially adapted him. Major Fenn submitted his resignation to take effect on March 31, but the Forester felt that the Service could ill afford to lose his services, and arrangements have been made for him to remain a member of the organization.

Major Fenn is one of those whom we affectionately term "old timers," and to whose spirit and sagacity the National Forest system owes much of its success. The son of pioneer parents and himself a pioneer, Major Fenn is one of the best known and most widely respected men in Idaho. His career has been as picturesque as it has been full of worthwhile accomplishments.

Born in a mining camp at a time when each man made his own law, as a young man living in frontier settlements still disturbed by Indian wars, and later as an officer in the Spanish-American War, Major Fenn has had a variety of adventures such as few men experience. Yet his was not the spirit of many of those who were in the undeveloped territory in the early days. At a time when others had little thought except the accumulation of property his attention was turned to the progress of the State as a whole. He was prominent in the formation of the State of Idaho, was a member of the first constitutional convention, speaker of the first State session, three times a member of the Idaho House of Representatives, and Chairman of the Republican State Committee in a Presidential campaign.

It is said that, back in 1901, influential political friends offered to secure a Federal judgeship for him. His reply was characteristic of the man. He declined the honorable and well-paid job and asked that he be given the place then held by a highly inefficient Forest Reserve Superintendent. That was the beginning of his connection with forestry. In 1905 he came into the Forest Service when the National Forests were transferred to the jurisdiction of the Department of Agriculture and he

District 1 - Northern District (continued)

has been on the job ever since. He was made Supervisor of the Weiser Forest in 1905, and of the Sawtooth and Payette in 1907. Later in the same year he was placed in charge of the Bitterroot and in 1908 was transferred to the Clearwater, and afterwards to the Selway. In 1915 he was made Assistant District Forester in charge of Lands in the Missoula office, which position he retained, while a ssisting in other and varied lines of work in the District office.

His popularity and reputation for fair dealing have always been a tower of strength, particularly in those early days when the Forest Service was so constantly under fire. In the district office his services have been conspicuous as a counselor to others as well as in the conduct of his own Lands work. It is a source of considerable satisfaction to know that the Service will continue to have the benefit of his advice and assistance.

Scout Executive Benjamin Owen and Supervisor Clark of the Deerlodge recently held a conference relative to the forming of a Forest Fire Prevention Corps in the Boy Scouts. The tentative plan on which they are working limits the membership to First Class Scouts who pass an examination on fires, causes and effects, and methods used in fighting fires, organization of the Forest Service and duties of the administrative officers. Scouts who pass the test will be awarded certificates and badges by the Supervisor. These certificates will give each corps member authority to secure names and addresses of any person using National Forest lands for recreational purposes. Plans are being made for a series of illustrated talks to the different troops relative to National Forest work.

Ranger "Jimmy" Brown of the Deerlodge has returned from the flying field at Riverside, California, bringing with him many tales of the wonderful climate and interesting stories of his experiences "in the air." The Forest Service cadets were not called upon to make any aerial trips, but Mr. Brown was up twice and he gave vivid descriptions of the sensations experienced during the evolutions of the Immelman Turn, Loop the Loop, etc. He liked the game and is ready to fly again when opportunity offers.

District 2 - Rocky Mountain District

Sixty delegates attended a meeting at Baileys, Colorado, on April 10, which effected a permanent organization of the Platte Canon Hotel and Resort Owners Association. This Canon, which lies within the Pike National Forest, is one of the best known summer resort regions near Denver, and the purpose of the new association is to advertise the attractions of this summer recreation area through booklets and paid advertisements in newspapers and magazines. W. I. Hutchinson represented the Forest Service at the meeting and spoke before the association.

As a part of the general campaign throughout the United States to educate the public in prevention of forest fires, Colorado will observe Forest Protection Week from May 23 to 29. This movement has been endorsed by the Denver Civic and Commercial Association and the Colorado Mountain Club. A petition will be presented to Governor O. H. Shoup asking that a proclamation be published dedicating this week to forest conservation. It is also the plan of the Forest Service to extend this movement throughout Wyoming, South Dakota, and Minnesota also. Forest officers together with churches, schools, and commercial and rotary clubs will join the campaign to instruct the public to use care with fire in the Forests.

The tourist season in Colorado is on. Two motor campers from California pitched their tents on April 10 in the new Denver Municipal Camp Grounds. In 1919 more than 450,000 "motor gypsies" visited the National Forests of Colorado.

Considerable interest is being shown by local clubs and business organizations in Deadwood and Lead, South Dakota, in the establishment of a game sanctuary in the Black Hills region covering territory in the vicinity of Roosevelt Mountain and westerly from Spearfish Canon as far south as the Black and Yellow Trail. This, with the area already reserved in the vicinity of Custer State Park, should take care of the game situation in the Black Hills region, especially if that portion of the Black Hills in Wyoming is made a part of the preserve. The matter has been presented to both Governor Cary and Governor Norbeck in special reports and the plan now for South Dakota is for interested parties to present it at a special session of the legislature to be called soon.

District 2 - Rocky Mountain District (continued)

Does speed in the get-away count? We'll say it does. When it is possible to cut down the average elapsed time in starting for fires to ten or fifteen minutes, cost and damage figures will be reduced materially.

The following figures for the three past years indicate results along this line and may be of general interest:

Year	Average time between report of fire and start of force and equipment (minutes)	Average time between start and arrival of force and equipment (minutes)	Average area of fires on arrival (acres)	Average total area burned over (acres)
1917	202	164	339	422
1918	132	147	161	396
1919	98	187	61	352

Thus a direct relation is shown between speed in the get-away, the size of th fire when reached, and the ultimate area burned over before control.

The average record for getting men and equipment to fires in 1919 is not as go as in 1917 and 1918, and the probabilities are that more acres were burned because of this fact than would otherwise have been the case.

"Minutes Count" in our fire game just as surely as they do for city fire suppression.

The office of the Pike Forest has purchased for $150 a six-room, modern house in excellent condition at the mining camp of Cripple Creek, Colorado. This house is to be used as a ranger station at Cascade, 45 miles from Cripple Creek, to which plac it will be moved via truck. The only new equipment of any consequence which will be needed is shingles for a new roof. The total cost will be much under the estimate for building an entirely new house.

Fred C. Hill, Surveyor-draftsman on District 2 for the past six years is now with the Bureau of Public Roads.

George E. Trowbridge, assistant to the solicitor, in charge, has handed in his resignation to become effective May 1, after which time he will be associated wit the Southern California Edison Company at Los Angeles, California.

Snow, rain, and sleet, driven by a fifty mile an hour wind swept the Rocky Mountain region with the worst storm of the season and the biggest April blizzard experience since 1885. This constituted the monkey wrench that Old Man Winter, sitting in the lap of Spring, hurled into the traffic and communication machinery of Colorado, Wyoming, and Nebraska on April 17 and 18. Eighteen inches of snow fell in Denver and from two to three feet in the mountains. In places, great drifts were formed by the wind-driven snow. Street car, telephone, and telegraph systems were tied up badly and all south and west bound railroads completely blockaded two days.

It is expected that there will be considerable loss of livestock, although no reports have yet been received from the field. The lack of low temperatures at the time of the storm may prevent an undue amount of suffering by cattle and sheep.

This storm will insure an ample water supply for next summer as well as an abundance of crops. It will also cause Forest officers to cease worrying about ear spring forest fires.

District 3 - Southwestern District

Three unfailing signs of spring - the circus, the baseball, and the mobilization of soap and brushes in a house cleaning campaign. The first two are not much in evidence at the outlying stations of the District, but there's no reason for bein minus all three signs. The rake and hoe might be added to the spring signs last mentioned above and give spring, gentle spring (as per the poet), a joyous welcome inside and outside the ranger station.

One of the first cases of cooperation with private timber land owners on the Santa Fe is about to be put in effect. Max Nordhaus of Albuquerque, who owns a section of land with summer home improvements on Gallinas Creek about ten miles northwest of Las Vegas, has decided to sell the sawtimber on the property and has applied to this office for assistance. Forest Examiner Backus will probably mark the timber and handle the sale, which will be conducted under the standards of the Forest Service.

Resolution No. 5, New Mexico Cattle & Horse Growers Convention:

"Whereas, in the opinion of this association the nation has been deprived of the services of two able and conscientious public servants in the resignation from the United States Forest Service as Chief and Associate Forester, respectively, of Henry S. Graves and Albert F. Potter, and

"Whereas, we recognize in these men sincere friends of the livestock industry whose public service has been of the greatest constructive usefulness to the nation, and especially to the livestock growing regions of the West, now therefore be it

"Resolved, that the New Mexico Cattle and Horse Growers Association deeply regrets the resignation of Henry S. Graves and Albert F. Potter from the Forest Service and tenders to them our most cordial expression of appreciation for their services and for their unfailing fairness and energetic cooperation in all their dealing with the livestock industry; together with assurance of our knowledge of the notable constructive work performed by them for the conservation of the National Forests, the best use of the grazing areas, and the sound development of the West."

Supervisor Selkirk has secured several pairs of old elk horns on the Apache Forest for the Biological Survey. The donors are Messrs. Milligan, Cooper, and Hunter, local residents.

The Lincoln is keeping up its usual activities in game violation prosecutions. Ranger George W. Messer has just submitted a report on a turkey killing case, which will probably be prosecuted in the near future.

The largest grazing permit on the Tusayan, that of Dr. E. B. Perrin, has been transferred to Charles Burton. The transfer involves a paid preference of 9,050 head of sheep and 800 head of cattle. The latter are only temporarily on the Forest in place of 3,200 head of sheep, the regular preference being 12,250 head of sheep. Besides this there is a G-7 permit for 4,000 head of sheep. There is also involved the transfer in this office of 10 charge and 6 no-charge special use permits. Dr. Perrin has been a permittee on this Forest since its creation.

The Massachusetts Forestry Association plans to visit Santa Fe and the Santa Fe Forest again on its next extension tour. On May 2-3 a party of 125, under the auspices of the Brooklyn Eagle, will visit Santa Fe and the surrounding region, including the Bandolier National Monument as a part of their entertainment. They will probably have an opportunity to see the Santa Fe motion picture films taken by the Forest Service last summer.

Ranger Pinson of the Tesuque District on the Santa Fe Forest is being detailed to supervise the construction of the new house and barn at the Rito de los Frijoles. These structures will be built mainly from stone secured from the old Indian ruins and finished so as to resemble the buildings of the original inhabitants of this historic place. If association means anything, we can expect the custodian to eventually array himself in deerskins, feathers, and paint, but hope that he does not follow the trail back to the age before such attire became fashionable.

While climbing a tree to repair the telephone line recently, Lumberman Strickland accidentally caught his climbers on a strap in such a manner as to thrust the spur of the climber in his left leg. While not a serious injury, it is rather painful and on the doctor's advice, Mr. Strickland is staying at home on sick leave.

A gun-play case of considerable interest was tried in Alamogordo recently. On January 6 Ranger Roscoe C. James, of the Lincoln, while travelling down Carr Canyon, discovered drops of blood on the snow. This trail led to a place where a deer had been killed and dressed. The tracks of the man carrying the deer were followed. Ranger James procured a search warrant and the next day, in company with Ranger Daniel Felts, took up the trail again. Felts served the search warrant on Frank Weems. His son, Kirby Weems, however, took a gun from the wall, and informed Felts that if he found anything in the house, he would never get out of the place alive. Weems was arrested, released on bail, and indicted by the grand jury for brandishing a deadly weapon. The Supervisor and the District office got back of this case, but the trail resulted in a hung jury - 10 for conviction and 2 against.

It is greatly to the credit of Ranger Felts that during Weems' assault, he kept his head and did not even draw his gun, though he had every chance "to get his man" in self-defense. This fact won public respect for Ranger Felts and for the Forest Service, and Messrs. Felts and James won a moral victory in the outcome of the case even if Weems was not convicted. Those in touch with the case believe that justice has been practically attained, and that the prosecution produced a valuable result.

"The longer I work in the Service the more I am impressed with the desirability of hunting out correspondents with grievances against the Forest Service and considering their complaints on the ground. If this practice were more generally followed by Forest officers, from rangers to the district forester, I believe that many long drawnout disputes could be promptly terminated and many misunderstandings cleared up. I can not urge too strongly on all Forest officers to substitute personal interviews for correspondence in controverted cases. Where there is a lot of smoke, there is usually some fire. The man who evidences extreme bitterness against the Forest Service usually has some real or fancied ground for his attitude. If it is real, there is perhaps some wrong to be righted. If it is fancied, there is an excellent field for education work for both local and district officers, preferably the former. A personal interview has the advantage over correspondence methods in that it gives the complainant a better opportunity to present his side of the case. It is good psychology to give the complainant an opportunity to do this in detail. Of course, he has his opportunity via the correspondence route, but how many of our users are proficient in putting up their case to the best advantage from their own point of view? I want all Forest officers to make an extra effort during this field season to take fuller advantage than heretofore of the personal interview method of doing business. I cannot urge too strongly on Supervisors to turn over their offices to assistants, increasing to that extent the time they can devote to field work. It is the plan I personally intend to follow t his year and one whereby I believe closer relations can be maintained with Forest officers - rangers as well as supervisors - and Forest users."

F. C. W. B.

Another testimonial for the G. E. M. R. A.-

"If my endorsement of the Government Employees' Mutual Relief Association will aid in encouraging the wavering ones, I am glad to give it. I joined the Association in 1916, but never had an occasion to call on it for reimbursement until my recent pneumonia illness. Today I received a check for $51.93 covering the entire expenses for doctor, nurse, and medicines. Whether we ever have occasion to call on the Association or not, I feel that the protection it affords more than covers the small cost of the insurance."--L. C. DeC. - Santa Fe.

District 4 - Intermountain District

Deputy Game Warden Lee Lisenby of Cascade, Idaho, who made a trip into the Thunder Mountain country about the middle of last month in connection with a murder case on Big Creek, reports that in one draw on Big Creek about four miles from the mouth of Monumental Creek he counted 549 deer. Mr. Lisenby reported that the deer at that time were in good shape but that the brush wolves, which are a cross between the timb er wolf and the coyote, had killed lots of deer the past winter and in 14 miles along the trail he counted 29 carcasses. He states, however, that the settlers, all of whom had trappers' licenses, were doing good work in trapping and killing the wolves and that they had caught 90 wolves and coyotes this winter, averaging about 10 wolves to one coyote. Supervisor G. B. Mains of the Payette advises us that Larry Phelan who ha s spent the winter on the Middle Fork of Salmon River writes from there that the coyotes have killed thousands of deer in that vicinity this winter. Plans have been made with the State Game Warden to place Game Wardens and Forest Rangers in the region this coming winter to trap and poison these enemies of the deer.

A letter from G. B. McDonald, Professor of Forestry in the Iowa State College at Ames, Iowa, expresses a desire to bring his forestry class to the Targhee Forest during the coming summer. It is the custom of the school to take the class each summer to some National Forest where a practical study in forestry can be made. In past years these camps have been established in Colorado, Minnesota, and other points in the West. The fact that the Targhee is located near the Yellowstone National Park and offers opportunities for study in practically all lines of forestry work is a strong drawing card for that locality and the Targhee hopes that the class will decide in favor of that Forest the coming summer. The camp would be located somewhere in the Island Park country and the accessibility to the railroad would be a great convenience in securing supplies.

District 4 - Intermountain District (continued)

An unusually severe winter in the vicinity of Widtsoe, Utah, has been the cause for the death of hundreds of cattle every day. A number of stockmen are going thirty miles over the mountain through deep snow and purchasing hay at $25 a ton, hauling it back through the snow to feed to their stock in an endeavor to save some of it. The stock has had to be fed almost the entire winter. The loss of stock on the open ranges is very heavy, and the loss of the stock that has been fed on the ranches will reach serious proportions if the present inclement weather in that locality continues long.

The District Forester and the Chief of Grazing attended a conference recently at which the Advisory Boards of two livestock associations were contending for preference in the use of a certain range. The discussion waxed warm, and passing beyond the period of Forest administration reached back to the days when ranges were claimed in Indian fashion. Finally one representative made his most telling argument in proof of his position, as follows: "Well, say! You know it was men from our town that went up on the mountain and hung those sheep herders from the northern part of the State. You fellows never did."

Owing to the shortage of hay it has been reported that large numbers of the stock have been dying in the vicinity of Southern Utah Forests, and that at least 70% of the stock at the present was not in a condition to be driven any distance whatever.

Arrangements have been made with the Postoffice Department to have dies carrying fire slogans used in the cancellation machines at Boise, Pocatello, Idaho Falls, and Salt Lake City during the coming fire season.

The final approval of applications and allotments of range for the Thunder Mountain addition was completed at a joint meeting of the Idaho and Payette Forests Advisory Boards held at Emmett, Idaho, on March 30. A new driveway was established on the Idaho Forest into the area added to that Forest and an assessment of 2 cents per head levied by the board on all sheep using it, to build bridges and a pack trail. For fear this would not be sufficient to open up the trail this season the Payette and Idaho Associations each voted to donate $250 in addition to the assessment levied. The spirit shown by the Boards in cooperating to open up this territory was certainly commendable and gratifying.

A system of holding grounds along the stock driveways in the Forest was planned and rules adopted for their control. H. C. Shellworth, Land Agent for the Boise-Payette Lumber Company was present and arranged the leases on the company lands in such a manner as to provide holding grounds for the association permittees near all the shipping points. The meeting was one of the most constructive ever held on the Payette and shows what can be done when the spirit of cooperation prevails.

District 5 - California District

Don P. Johnson, Assistant District Forester in Charge of Operation, has submitted his resignation effective June 15, in order to take a position with a large naval stores company in Florida. Mr. Johnson entered the Service as a forest guard in February, 1908, on the Prescott. In 1911 he was made Supervisor of the Gila and served in the same capacity on the Santa Fe and Coronado Forests. On May 1, 1917, he was promoted to Assistant District Forester in Charge of Operation in District 3 and on July 1, 1919, was transferred to District 5.

Grazing permittees occupying the spring and fall ranges along the western side of the Lassen recently met at the Supervisor's office in Red Bluff, established definite range boundaries and signed a contract to erect 40 miles of 4-wire fence to define the boundaries established. This is a big step towards better management of stock and range lands and the effect on both will be watched with considerable interest. A careful reconnaissance of the range was made before the meeting and formed the basis for the boundaries established.

On March 4, Tuolumne County Supervisors passed the ordnance recommended by the Forest Service and State Board of Health, which makes it unlawful to dump or place any rubbish, garbage, etc., on any highway, public camp ground, etc., within the county. A reward of $25 is offered for the arrest and conviction of violators.

District 5 - California District (continued)

Road bulletins issued by the Service are receiving considerable attention by the papers and the information they contain is evidently appreciated by tourists and other automobilists.

Ranger Geo. L. Sadler, formerly in charge of the Mad River District on the Trinity Forest, and who has been on leave the past several months, has resigned. We understand Mr. Sadler is the possessor of a new bride as well as a fine new job as "boss" of a fruit ranch.

The insect control work on the San Joaquin Project on the Sierra Forest has been seriously interfered with by the severe and unseasonable storms. It was expected that the work would be well under way early this month. John Miller of the Bureau of Entomology is conducting the preliminary examination of the project and will make his headquarters in the vicinity of Northfork for a number of years in order to assist in the necessary follow-up work and experimentation.

Lumberman Joe Elliott has just left after spending a month in estimating and appraising two small timber sale propositions on the California Forest. As a result of this work, a sale of about six and one-half million feet is being made to the Glenn County Farm Bureau who have recently purchased a small mill on the California Forest for the purpose of manufacturing lumber at cost for the members of this Bureau. The sale will be made at the prevailing Reg. S-22 rate. The second sale involves about four million feet. The Paskenta Lumber Company of Paskenta, California, is the applicant.

During the past winter Los Angeles County, at its own expense, planted 200,000 conifer transplants on the area burned over by last summer's fires. Several years ago, and after the Forest Service abandoned nursery and planting operations on this Forest, the County decided to try its hand at it and established a large nursery for that purpose.

Immediately after last summer's fires, the County Forester, with the assistance of the Boy Scouts and pupils of various city schools, collected and sowed approximately 20 tons of chaparral seed on the same burned area.

In past years Los Angeles County has given us from $10,000 to $15,000 a year to assist in improvement work. This year, using the fires of last summer as an excuse, we are going to ask for $25,000 and believe we will get it.

Here is some interesting information on the use of lands within District 5 Forests that were patented under various homestead acts:

Total number of patented homesteads (including June 11)	6,875	100%
Number of homesteads occupied by original entrymen	1,333	19%
Number of homesteads occupied by others	1,710	25%
Number of homesteads unoccupied (usually abandoned)	3,832	56%
Total area of above patented homesteads (in acres)	775,000	100%
Total area under some form of cultivation (in acres)	75,524	.097%

With less than 10% of all patented agricultural lands within our Forests under cultivation, the arguments that we are locking up cultivable areas is pretty much of a dream, especially when it is known that these patented homesteads, many of which were taken 20 to 40 years ago, include the cream of the farming lands.

Figures from various Forests are illuminating. The Eldorado, with 306 patented homesteads, has only 80 acres out of 48,000 under cultivation. On the Tahoe, 795 or 90% of the 879 patented homesteads are abandoned. The Stanislaus, Trinity, and Plumas show figures about along the same lines.

On the other hand 38% of the patented homestead area on the Klamath is under cultivation, while 89% of these lands on the Mono are producing crops. On these two Forests, however, there were no "early day timber" homesteads.

Turning to June 11 patented homesteads we find 967 claims patented to March 1, 1920, and 20% of these or 194 are already abandoned, and only 16% of the entire area embraced in those 967 homesteads is under cultivation, although most of the land has been occupied from 5 to 20 years. On March 1 there were also 632 June 11 homesteads pending. That is to say, filed upon but not yet patented. Twenty-two percent of these claims are already abandoned and only 16% of the land embraced in these claims is under cultivation. Of the total area of 346,837 acres that we have listed under the Forest Homestead Act in the past 14 years, 38,774 acres or 12% we know have never been filed upon, and probably if figures for those lands that have been eliminated from the Forests were available, the percentage would be much higher.

These figures are the best answer to the claim that the National Forests are preventing the development of the agricultural lands within their boundaries.

District 6 - North Pacific District

The plan of campaign for Forest Protection Week, May 23-29, is growing in size and importance. At a recent meeting in Seattle of the committee for the State of Washington the greatest amount of interest was shown and practical suggestions were made for putting the drive over. The Washington committee is composed of the following representatives: Herbert Evison, Secretary of the Natural Parks Association; Oscar Bystrom, Secretary, Washington Forest Fire Association; Douglas Sheler, Manager Washington Automobile Association; Stuart Walsh, State Executive, Boy Scouts; Dean Winkenwerder, University of Washington Forest Department; L. Howard-Smith, Member Natural Parks Association; Mrs. George A. Smith, Chairman Conservation Committee, State Federation of Womens Clubs; and George H. Cecil, District Forester.

Forest Examiner Heintzleman left on April 7 for several months timber survey work in Alaska. His work will consist of examining and reporting on several specific chances for pulp plants, about which an increasing and very encouraging interest is being shown by several large concerns. Present indications are that one or more pulp plants will probably be starting in Alaska before long. Good publicity has recently been given by Alaskan and Northwest newspapers to the pulp possibilities in Alaska, all bringing out the point that the Forest Service is now and always has been endeavoring to develop Alaska's resources.

To stimulate the interest of Boy Scouts in the Forests and in forest protection, Supervisor Allen and Clerk Griffith of the Rainier Forest, have written a playlet "The Flame in the Forest" for presentation by the Boy Scouts of Tacoma. The playlet brings out the advantages of scout craft and also the importance of protection of the Forests from fire. The lines are well written, in blank verse with fine sentiment, and it is believed that the play will have a wide appeal. Rehearsals are now being held in Tacoma and the present plans are to present it on April 30, with possibly later productions in Seattle and nearby towns.

Telephone Engineer Allen believes he can get valuable help in the wireless telephone work of the 1920 fire campaign from Portland amateurs. With this end in view he has been sending messages from the roof of the Post Office building, to be picked up by amateurs. Several listeners-in have been so successful that he believes they could take the messages that are to be sent this summer from patrolling airplanes to the various stations on the Forests if the air patrol is used. However, Mr. Allen's expedient for getting his help may be considered a temporary one, since he wants to start a training school to instruct rangers in wireless work.

Two thousand dollars was made by W. L. Stillwell, former temporary employe on the Washington Forest, during the past winter trapping martins. The pelts brought prices ranging from $17.50 to $75 each. Mr. Stillwell gave this information during his recent call at the office of the Washington Forest, Bellingham, to complete arrangements for going on duty as a fire guard on that Forest.

A stock watering reservoir is being constructed on the Deschutes Forest after the plan followed in the arid regions of Arizona and New Mexico. This stock tank when completed will make available several thousand acres of range now unused because of lack of water during the grazing period. Snow water draining from the higher elevations will be diverted by ditching into two gulches and thence by another ditch, protected by a headgate, into the reservoir.

Water supply for over a thousand cattle is being provided on the Columbia Forest, Mount Adams region, by a pipe line of a mile and a half, to an area of good range, but hitherto waterless. The pipe line will cost $1,600, of which $300 is to be borne by the Service and the remainder by the Mount Adams Cattle Association. This association has other range improvements to its credit, having constructed three miles of drift fence last spring. All of its 30 members are users of the Forest.

To extend and perfect the telephone system of the District until every member of the protective force shall be within quick reach of a phone are the present needs and aims of the District. To accomplish this six hundred miles of new line on the Forests of Oregon and Washington are planned for the coming fiscal year.

That aviators of the proposed air patrol may easily recognize the cities of Oregon and Washington over which they are flying, it has been suggested that designating initials, or other suitable marks, indicating the name of the town, be painted or marked on the roof of a conspicuous building in each city and village.

District 6 - North Pacific District (continued)

Supervisor Harvey W. Harris of the Wallowa Forest has resigned effective April 30. Mr. Harris entered the Service as assistant forest ranger on the old Imnaha in 1907, and was made supervisor of the Wallowa on January 1, 1910. During his ten years on the Wallowa Mr. Harris has succeeded in building up an efficient administrative organization and has helped in the proper development of the resources of his Forest. He has many friends throughout the District who wish him every success on his ranch, near Kettle Falls, Washington.

Mr. Harris is succeeded by Nelson J. Billings, who came to the Wallowa as deputy supervisor in September, 1912, from the Fremont, where he was a ranger and lat grazing assistant.

District 7 - Eastern District

On April 23 Supervisor Russell of the White Top Forest in southwestern Virginia and northeastern Tennessee, reported a bad fire situation owing to lack of rain and high northwest winds. He has been authorized to employ emergency patrolmen. The local forecaster of the Weather Bureau reports continued high winds and holds out no hope for relief in the way of rain for several days.

Assistant Engineer J. W. Fox has been in the field for a week in connection with road projects in South Carolina, Georgia, and North Carolina. The work is going forward on the Bennett Gap road in the Pisgah Forest, and it is hoped that a contract will be let for the construction of two sections of the Three States road in South Carolina, Georgia, and North Carolina by midsummer.

Assistant District Forester Eldredge has returned to Washington after a ten days' trip in the South in connection with the Capper Resolution. He has been looking into the future supplies of naval stores timber in the southeastern and Gulf States and reports that the naval stores industry is faced with an acute shortage of timber in the eastern part of the territory. The supply in the western territory - Louisiana, Mississippi, and Texas - is being depleted very rapidly by sawmills. Considerable interest was evidenced on the part of southern operators in the prospect of working western yellow pine.

Applications by various timber operators and forest product manufacturers serve to emphasize the urgent need for intensive forest management plans for the Eastern District for both material and factory locations.

Recently a large electrical company asked for a location from which it could cut 5,000 electric poles 35 feet in length annually over a period of four or five years. We are at present trying to locate this operator. This comparatively small number of poles would not appeal to the western districts as of much importance, but when it is considered that District 7 receives from $1.50 for 35-foot poles to $3 for 50-foot poles it will be appreciated that such a sale is of no little importance.

Another operator is scouting the eastern Forests for a location where he can secure a certain amount of timber annually over a period of eight or ten years in order that he may install a plant for the manufacture of a novelty toy. The importance of such an operation can be appreciated when it is remembered that the kiddie-car people began operations about five years ago with a personnel of five men. Today with 2,000 employees working at maximum capacity they are able to supply only about 60 per cent of their demand.

WEEKLY BULLETIN
Forest Service - Washington Office
(Not for publication)

May 3, 1920.

Civil Service Retirement Bill

The long talked of Civil Service Retirement Bill now seems assured of becoming law. The bill has passed both houses of Congress and goes to conference with every prospect of being adopted in the early future.

Automatic retirement of all employees in the classified Civil Service who have reached the age of 65 years and who have rendered at least 15 years' service is provided. Upon the certification of the head of the department or branch concerned, such employees may be retained for a term not exceeding two years, at the end of which time by a similar certification additional terms of two years not to exceed five terms in all, may be allowed.

The bill designates six classes of employees, ranging in term of service from 30 or more years to not less than 15 years, and provides annuities ranging from a maximum of $720 to a minimum of $180 per annum. Persons who draw pensions for service in the Army and Navy, Marine Corps or Coast Guard of the United States may also receive annuities under the bill.

Provision is made for retirement of employees who shall have served for not less than 15 years but who become totally disabled before reaching the retirement age.

The bill provides that, beginning with the third month following its passage and monthly thereafter, there shall be deducted a sum equal to 2 1/2 per cent of the basic salary, pay or compensation of each employee affected by the bill, to constitute a fund known as the Civil Service retirement and disability fund, which will be used for the payment of the annuities and allowances provided by the bill. Persons who leave the employ of the Government will be refunded the amounts withheld from their salaries including interest at 4 per cent.

Stock Grazed under Reg. G-5

A summary of the number of stock grazed free under Reg. G-5 for which no permits were issued during the grazing season of 1919, shows a total of 114,537 cattle, 15,932 sheep, and 7,000 hogs, which were owned by 29,609 persons. The grazing fees if collected on this number of stock, taking the average fee for cattle at 72 cents, and for sheep at 12 cents, would amount to $84,384. In addition to this we grazed free of charge 3,392 head of cattle and 12,000 head of sheep belonging to 515 different Indians, the majority of them being grazed in District 3. The number of permits issued for this G-5 stock shows that about 3 out of every 4 of our permittees are grazing an average of 4 head of stock under this regulation.

Facts and Figgers about Pulp and Paper

The annual newsprint requirements of city daily papers vary from about 2,500 tons in the smaller cities to 160,000 tons in the case of the New York Journal, the paper having the largest circulation in the country.

A few of the newspaper companies, such as the New York World, have their own paper mills. The New York Times makes most of its newsprint at its mill in Brooklyn, using pulp from Canada. However, the company recently bought 2,500 tons from the Powell River Company in Vancouver. The cost of this paper delivered in New York, including freight charges amounting to $24, was $125 a ton, which was cheap compared to spot market prices of $140 to $160.

The present abnormal consumption of newsprint is, of course, the result of the unusual amount of advertising. Newspaper advertising in the 16 leading cities of the United States increased from 56,000,000 agate lines in January, 1919, to 80,000,000 in October, 1919.

Whether justified or not there is a general feeling among publishers that there is at least an understanding between the manufacturers. Almost every publisher was reduced on his 1920 contract, with the result that he will have to buy the balance of his requirements on the spot market. With spot sales of $8 to $10 per hundred pounds it is, of course, to the advantage of the manufacturer to sell as much as possible in that way, and still retain his regular customers.

Reports from Canada indicate that the yearly production of newsprint is over 800,000 tons, and that only 120,000 tons are consumed in the country. The mill capacity of Canada is being considerably increased.

A Forest Policy for Massachusetts

Col. Greeley last week attended the hearing before the Ways and Means Committee of the Massachusetts State Legislature on the bill which is being sponsored by the Massachusetts Forestry Association. The bill provides for the acquisition by the State of 250,000 acres of forest lands and for the reforestation of such lands as they are acquired. A very complete financial statement has been prepared which showed the profit which would result to the State from the adoption of the bill. The cost of the lands is figured at $5.00 per acre. The planting with white pine was estimated at $15.00 per acre.

It is planned to handle the lands on a 50 year rotation which, it is estimated, will produce a stand of 30,000 feet to the acre. In calculating the ultimate returns, the very high maintenance cost of 70¢ per acre was used and a stumpage figure of $20 per thousand was taken. A number of lumbermen protested that this latter figure was much below the price which white pine stumpage could be expected to bring. Even with these conservative allowances the statement showed that the growing of timber would be a most profitable investment for the State, aside from the general benefits which the forests would secure.

The bill commits the State to a policy of acquiring lands for forestry purposes and provides for the issuance of an unlimited amount of bonds to meet the necessary expense. There is a wide-spread sentiment in favor of the adoption of the bill and the persons who appeared before the committee gave many facts and figures to substantiate the financial desirability of putting a forest policy for the State into effect. The adoption of the bill, which now seems probable, will mark a distinct step forward in the progress of forestry and it will point the way to other States who have thus far failed to realize the financial and economic advantages of growing timber.

Picked up in the Hall

Proposed amendment to the regulations:

Reg. X-13, paragraph 23. Hereafter no resignations will be received by the Forester except twice each year. Persons intending to resign must file their resignations with "Martha," who will hold them until June 30 and December 30 each year, respectively.

This plan will enable the Forester to decide on the character of farewell ceremonies to be given in each case. Resignations will be bunched in lots of six and a committee will decide as to the character of the function, the style of picture, book, or banquet to be given. As far as possible the matter will be standardized so that more economical methods of handling this increasing class of business may be instituted. Resignations should also designate the particular style of ceremony the resigner prefers, banquet, dance, speech-fest, etc.

Sec. 2. Officials of the Service having resigned and afterwards re-entering the Service will be required to refund to the resignation committee their pro rata share of the cost of the entertainment given them."

What does the Forest Service need?

"The Forester need not necessarily be a trained forester, although that qualification is a good one to possess. There are any number of expert foresters in the country whom he can employ. The Forester need not be a keen business executive. He can get plenty of men to look after this end of the work. But the Forester should be one of those all around individuals who will not spend ten or fifteen hours a day at his desk; a man who will not attempt to be the first at the office in the morning and have the mail all read and sorted and half answered by the time the chief clerk gets on the job.

He should rather have the qualifications of the $100,000 a year president of a business institution with that peculiar ability to get results without apparent effort. A human dynamo who gets action from others without using up all his energy in his own personal, intimate contact with his job.

He must, above all, be a man who can command the favorable attention of official Washington. He must have sufficient personality to outshine a cabinet officer; be able to lead the grand march at the inaugural ball; play tennis back of the White House, deliver a lecture before an archaelogical society or a bankers' convention; get his name in the papers at least twice a week. He should be politician enough to command influence not only at the capitol but elsewhere in the country.

It is hard to get all this in a $5,000 a year man. But if a $5,000 a year man can show that he has this leadership in him the West Coast Lumberman believes the country and Congress will be quick to raise his pay, and along with him the pay of hundreds of other worthy and efficient employees of the Forest Service."

(West Coast Lumberman April, 1920.)

Not Without Honor in his Own Country

The news that Sir David E. Hutchins has been knighted by the King of England in recognition of his services in forestry to the British Empire brings home the fact that in European countries good work in forestry is rewarded in the same way that it is in other lines of endeavor.

Sir David Hutchins has worthily earned the honor which has been bestowed upon him. After ten years in India he organized the Forest Service in British

Not Without Honor in his Own Country (continued)

East Africa and remained there for 23 years, retiring as chief conservator. In 1909 he was retained by the British Government to report on the forests of Cyprus. It was largely due to his efforts that systematic forest development is now in progress in all of the Australian States except Tasmania. He prepared a comprehensive report on New Zealand which paved the way for the practice of forestry there, and is the author of many authoritative works on various phases of forestry.

The Purist Speaks

Shall it be "milch" or "milk?" The official ukase consigns "milch" to the scrap heap. Hereafter Her Highness, Old Bessy, is to be a "milk" cow, not a "milch" cow.

In spite of having certain mildly progressive tendencies (for instance, I use shaving powder and even recently purchased a safety razor and further irrevocably committed myself by laying in a large supply of blades and a sharpener) - in spite of these things, I have a certain aversion to tinkering with the mother tongue or even the grandmother tongue. Thus to substitute "thru" for that fine old word "through" vaguely irritates me, even though President Roosevelt tried to establish it in the official vocabulary. It seems a futile, superficial reform, like wearing overalls as the great solution of the high cost of living.

There is a subtle difference between "milch" and "milk." The first is an adjective, the second a noun. A milch cow is a cow whose chief business in life is giving milk - not to her offspring, but to her human parasites. A milk cow - what is she? A milk bottle is a bottle for containing milk, milk chocolate is chocolate containing milk, a milk whis--- O memories that bless and burn?. By analogy, a milk cow would be a cow one of whose principal constituents is milk. To reverse this chain of logic, who ever heard of a milch bottle, or milch chocolate? Besides these objections, there is a still stronger one. The combination "milch cow" rolls easily off the tongue. To utter "milk cow" one makes a positively painful effort to get in the "k" and the "c" and finally surrenders to indolence and says "milk ow."

To be sure, linguistic puristics can be carried too far. My esteemed contemporary, the District 6 "Six-Twenty-Six", has just come out with an article on "Lady Beetles." Of course, we can hope that this is a typographical error for the familiar "Lady Bug" of the nursery rhyme; but I fear the worst. Only that vulgar portion of the English-speaking peoples known as Americans speak the word "bug" above a whisper, and as for Lady Bug - oh dear. But, how can we be sure that Lady Beetles reared in the rude west are really ladies? We are therefore reduced to the generic name beetle, which I hope will satisfy everybody.

—W. S.

Mr. Potter's last Official Shot

The March edition of the National Wool Growers' Magazine contained one or two rather caustic articles on the manner in which the Service is handling the National Forest ranges. These, of course, were written from the point of view of certain big sheep permittees. Coming as they did from men who are prominent in that business and whose attitude has heretofore been considered very friendly toward us, they were a distinct shock to everybody.

One of the last official acts of Mr. Potter before leaving the Service was to sign and forward to the Wool Growers' Magazine an article in reply to the one written by Mr. A. J. Knollin. Mr. Potter's article will probably appear in the May number of the Wool Grower and will undoubtedly be read with great interest by all forest officers as well as sheepmen, as it sets out in a very forcible manner his judgment on these matters, and also, in my opinion, meets Mr. Knollin's objections in a clear-cut, satisfactory manner.

One of Mr. Knollin's chief points of criticism was the fact that our grazing regulations and general administration are not stabilizing the sheep business of the West, but to the contrary are rendering it uncertain and discouraging. It is interesting in this connection to know that the records show, that in Mr. Knollin's case, at least, he has little or nothing with which to find fault. This is proven by the fact that Mr. Knollin is today interested in the grazing of more than 14,000 sheep on two different Forests in Idaho, and that, except for a 10 per cent reduction in one of his permits which was enforced in order to take care of about 25 small settlers who desired range for their cattle, Mr. Knollin has not been reduced a single head since 1910. Therefore, his claims that the big sheepmen are being constantly harrassed and injured through reductions in their permitted number of stock falls very flat insofar as his individual case is concerned.

I am sure every forest officer will read Mr. Potter's article with satisfaction inasmuch as it is a sort of summing up of the grazing work of the Service during his period of official life and is an able defense of the whole grazing administration and the principles it stands for.

WILL C. BARNES.

"A Class A Man"

Recently a western Senator called up the Branch of Grazing and read a letter received from one of his constituents relative to the disapproval of his application for a grazing permit on a certain Forest. The complainant stated that he had been refused a permit because the Supervisor informed him he was a Class B and not a Class A man. "Now, Mr. Senator," the letter went on to state, "I was passed by the local board as a Class A man; went to Camp Dodge as a Class A man, went to France as a Class A man, went over the top in the battle of the Marne as a Class A man, was wounded and sent to the hospital as a Class A man, came back home and was discharged as a Class A man, and here comes this little whipper snapper of a forest officer and tells me I am not a Class A man. By what right does he overturn the rules of the United States army?"

Washington Notes

John F. Preston, Assistant District Forester in charge of Silviculture in District 1, has been selected to succeed Major Stuart as Forest Inspector in the Branch of Forest Management. Mr. Preston will arrive in Washington about June 1 to take up his new duties. His successor in Missoula has not been announced.

"Jimmy" Jardine will leave about May 15 for Corvallis, Washington, where he will take a position as Director of the Oregon Agricultural Experiment Station. In addition to the main experiment station at Corvallis, there are six substations in various parts of the State where conditions vary all the way from those of arid regions to a rainfall of 100 inches per year. Mr. Jardine's job is a big one but one for which he is admirably fitted and which he will have no difficulty in handling. He expects to keep in close touch with the Portland office of the Forest Service and his administrative work will doubtless carry him to many of the Forest headquarters.

J. G. Peters recently returned from a trip to Pennsylvania made for the purpose of getting acquainted with the field employees of the Department of Forestry and to arrange for the details of cooperation with the State under the Weeks Law. He expects to go to West Virginia early this week.

Forest Products Laboratory Notes

Two new courses have been started at the Laboratory. D. R. Brewster, Section of Timber Physics, is in charge of the one in "Kiln Drying" and T. R. Truax Section of Preservation, of the one in "Glue and Plywood."

Henrik Carbonnier, official representative of the government of Sweden was a visitor at the laboratory recently. Mr. Carbonnier is studying forestry and lumbering in the United States.

In his article, entitled, "Built-Up Wood" published in American Forestry in October, Mr. Butler, in commenting on the application of built-up wood construction, stated: "Even built-up railroad ties and telephone poles, while extreme examples, are by no means beyond the realm of possibility."

Now comes a letter from a company which has recently been organized and is actually making built-up railroad ties. These ties are being tested out by the Southern Pacific Railroad in Nevada. A sample tie was recently exhibited at the National Railway Appliance Exhibit in Chicago. It is claimed for this particular type of laminated tie that it nets a saving of about 15 per cent in the number of ties necessary, and about 10 per cent in quantity of lumber required for each mile of track. This is because of its increased width at the ends. The tie is constructed of 1-inch, 2-inch, and 3-inch surfaced lumber reinforced at each end by four pieces of surfaced lumber 2" wide and 2½' long. One-inch dowels are used to secure the laminations and the lumber is treated before it is put together. All of which goes to show that the realm of possibilities in our work is often just outside the door.

Next, laminated telephone poles!

"It is recognized that too little attention is given to the proper selection of wood materials and conservation of such; therefore, the Forester must become a direct asset to the manufacturer."
(Extract from letter from the Prest-O-Lite Co., Inc., to The University of Wisconsin)

A Forest Products Laboratory bowling team, consisting of Misses Laura Stidgen, Helen Kaether, Anna Sloan, Helen Frank, and Gertrude Griffin, won first prize - $12- in the city tournament last week. Some of the best women's teams in the city were represented but none could outplay the F. P. L. team.

Mr. Butler, Ass't Director, attended the Second American Lumber Congress and the annual meeting of the National Lumber Manufacturers Ass'n held at Congress Hotel, Chicago, April 20-22. On April 23 he gave a talk before the Western Efficiency Society at the Club rooms, on "Is it made of wood -- Uncle Sam will help you make it better." He used the movie reel to illustrate his talk.

The senior foresters of the Pennsylvania State College, School of Forestry, who are on their tour through Michigan and Wisconsin, recently visited the laboratory.

In a letter which the Director received recently from Mr. C. E. Lane Poole, Conservator of Forests of Western Australia, he says, "I have just been having a talk with Mr. I. H. Boas, who returned to Australia recently, and he spoke in very grateful terms of the many courtesies he had received from you and other officers of the Madison Laboratory."

District 1 - Northern District

C. K. Wyman, Supervisor of the Beaverhead Forest for nine years and sheriff of Beaverhead County, Montana, since 1916, was shot and killed on April 21 at Monida, Montana, by a horse thief, whose arrest the authorities at Idaho Falls had requested.

It is thought that Mr. Wyman did not see his murderer, who fired without warning. After the shooting the fugitive attempted to escape, but his horse was shot down. He managed, however, to get away on foot and at last accounts was being pursued by a posse.

Mr. Wyman was appointed as a ranger by Mr. Sherman on March 1, 1906, and made many friends for the Forest Service among the stockmen at a time when the entire organization was under fire. He was one of the most popular and well-known men in the country and was a terror to all cattle rustlers.

District 2 - Rocky Mountain District

The Forest Service sign shop operating in Denver during the past winter closed on April 1.

A total of 1843 signs comprising 4300 square feet were constructed at a cost of 70.85 cents per square foot. Included in this total were 155 special signs made for the Colorado Mountain Club carrying an appeal for people to "Spare the Birds and Flowers."

The livestock situation in northwest Colorado is the worst in years. On the Yampa River, from Steamboat Springs to Toponas, the snow is from 2½ to 3 feet deep. Nearly all of the ranchmen in this district are out of hay. In Middle Park, from all reports, the hay supply is exhausted and numbers of cattle are dead of starvation, a good many have been turned out on the hillside. The same conditions apply on Snake River and the loss is expected to be 50% or more in Moffat County unless hay is gotten in at once or conditions open up. Sixty cars of hay intended for the Middle Park section have been waiting in Denver for a couple of weeks for the Moffat Road to cross the Pass and, with no recurring storms, this can't be accomplished before April 28. One party at Yampa, Colorado, offered a neighbor $1,000 for 15 tons of hay in the stack and was refused. Northwestern Wyoming escaped the last severe storm of the 17th, but east of Cheyenne conditions are bad where there is hay shortage. In eastern Colorado along the Union Pacific railroad there has been a loss of about 10 per cent of cattle on the average, and some owners have lost as high as 50 per cent. A conductor reported to the Forest Service that on his trip along the Brush division of the Burlington he saw as many as 500 dead cattle along the right of way. In one place the conductor said he saw 10 dead steers within a distance of 100 yards, drifted up against the railroad fence.

In southwestern Colorado in the vicinity of the San Juan, Durango, and Montezuma Forests, some losses of cattle are being incurred at the present time due to the snowstorms which have been general during the past two weeks. There was a rather open winter in this section of the State and, in general, there is a surplus of hay at the present time. The losses are occurring in individual cases where there has been hay shortage. The loss in this section of the country, however, will not be nearly so great as in the remainder of the State.

Telephone Engineer E. R. Kylie delivered a lecture before a meeting of the Colorado Scientific Society, the American Institute of Electrical Engineers and the Technique Club, which was well attended.

District 3 - Southwestern District

Cutting presidential timber on the Coronado:
In trimming the allotment sheets, we find that the Coronado has listed one Leonard Wood as Old Baldy Lookout. We have cut him off so that he can run for President.

The following officers of the Gila Forest gave short talks on fire prevention on Arbor Day:

Supervisor Winn	Animas District School
Deputy Supervisor Cope	Silver City State Normal School
Ranger Hulbert	Pinos Altos Public Schools
Ranger Warnock	Mogollon Public Schools

Trees secured from the Forest nursery at Fort Bayard were planted at the Silver City State Normal School and at Pinos Altos Public School under the supervision of Forest officers. The trees planted at the Normal School were dedicated to the memory of students and a number of the faculty of the Normal School who lost their lives while under the colors in the U. S. Army.

"The Coconino has nothing over the Lincoln so far as public service is concerned, as is evinced by the fact that while the 'Flu' was raging in the vicinity of Mayhill, Ranger Smith not only installed a surplus telephone in a central location in order to afford telephone connection with the doctor and made several night rides for that same doctor, but when he and his entire family finally came down with the disease, our Chief Clerk was installed at the Ranger Station as 'Chief Nurse,' remaining there for a week and taking with her from Cloudcroft a supply of Medicine for use by residents of the Mayhill community."
- The Lincoln Forest.

Arrangements have been made by the District office with a local automobile and supply company at Albuquerque, whereby standard parts for Ford cars owned by the Forest Service may be purchased at a discount of 25%, and Oldfield casings and inner tubes at 12½%. Cost of transportation from Albuquerque will need to be considered in deciding whether to purchase in Albuquerque or locally.
Arrangements have also been made for purchase of the above make of casings and inner tubes for personal use by members of the Forest Service at a discount of 12½%.

The Rangers of the Lincoln were recently detailed one by one to the Supervisor's office for several days. During this period, the men had the opportunity to go over and take part in the various lines of work handled in the Supervisor's office. After the detail was over, each man wrote a letter as to the benefits he derived from the detail. There is unanimous testimony in these letters that the men got a sort of bird's-eye view of the whole job of Supervisor, and an insight into running the Forest as a unit. Each man went back with a clearer conception of how he fitted into the organization and how important his work is in making the organization do its job effectively. In addition to this, they all got valuable training in administrative details and routine. This is training of the very highest type - the training that comes from doing things instead of being told how to do them.

A note in the Land Service Bulletin states that the Baca Location No. 1, which is located in the heart of the Jemez Division of the Santa Fe Forest, will shortly be surveyed. An interesting and quite technical surveying problem is involved in which the usual order of land surveys is reversed since the boundaries will necessarily have to be surveyed so as to produce a given area. The requirements in detail are: To produce a tract in square form, having as its center a quarter-section corner on the south boundary of Sec. 34, T. 20 N., R 4 E., N.M.B.M. with the boundaries running north, south, east and west, a sufficient distance therefrom to embrace an area of 99,298.39 acres.

Two skulls taken from rams of the same age weighed respectively as one to five according to the Canadian Live Stock Journal. The former was a hornless individual, the latter horned. In producing five times the amount of horn and bone in the latter ram, certainly vitality and food that would have gone into meat was sacrificed. The moral is obvious - breed to hornless varieties and thereby concentrate on meat and wool production.

The Secretary approved the cooperative agreement for the construction of seven miles of the Luna-Stevens Sawmill Road on the Datil Forest, on April 22. The agreement provides for the expenditure of $30,000 federal funds and $10,000 county funds. It is expected that construction will be commenced by the Bureau of Public Roads within the next 60 days.

Extract from diary of Ranger Warnock of the Gila Forest, April 6, 1920:

"Left camp at 7 A. M. and climbed mountain afoot along prospective trail route. Very steep and rough but a good grade may be worked out. Near top in rim rocks found old bear and two cubs. Killed old one and one of the cubs by accident. Captured other cub alive. Carried all three down mountain. Some job."

A sale of 2,100,000 board feet of Douglas fir, white fir, Engelmann spruce, white pine, limber pine, and Western Yellow Pine, was made today to W. F. Culbertson, sawmill operator of Cloudcroft, New Mexico. The stumpage price was $3.25 per M feet. The lumber will be milled in the woods, hauled to Cox Canyon, a distance of 3 miles from the mill, and shipped to various local markets over the E. P. & S. W. Ry. The logging will be over log chutes. Three miles will have to be constructed to log the 520 acres. Three years will be allowed for the removal of the timber.

An estimate of the oil content of the Colorado oil shales shows that there is available from this source of raw material more oil and gasoline than has been manufactured in the United States within the past seventy-five years. Seems as if Henry Ford's efforts with his 3,500,000 representatives running about the world's highways and byways, to sop up the entire gasoline supply, will be doomed to failure after all.

Resolution No. 3 adopted by the New Mexico Cattle and Horse Growers' Association:

"Whereas, the administration of the National Forests by the Department of Agriculture has been on the whole most satisfactory, and

"Whereas, there seem to be no special advantages and some possible drawbacks, to a change of administration, therefore be it

"Resolved, that the New Mexico Cattle and Horse Growers' Association go on record as being strongly opposed to transferring the administration of the National Forests from the Department of Agriculture to any other Department."

"Speaking of the qualities of 'Old Dobbin' - I have a horse that will drive up the milk cows without any assistance whatever - can anybody beat it?"

- Rogers of the Datil Forest.

District 4 - Intermountain District

It continues to snow on the Manti National Forest and at the Experiment Station the snow is 5 feet deep while at the summit of the mountain it is about 7 feet deep. In general the snow runs about two feet deeper than it did on the same date a year ago. Roads are reported to be good in the valley except for a few hours after the frequent showers.

Ranger George A. Green, Jr. on the Wasatch Forest reports that during a recent ski trip into Big Cottonwood Canyon on that Forest, an average depth of 5'2" was measured. On the morning of the 14th, a snowstorm occurred, the depth of which is not known at present. The Ranger reports two snowslides in the canyon, one the largest that has run for years. One is a fourth mile wide and about 50 feet deep at the deepest place. Another is approximately 400 feet wide and 30 feet deep.

The demand for timber on the Lemhi River watershed on the Salmon Forest amounts to approximately 4,000 M. feet per year. The largest item making up this total is railroad ties, for which there is a probable need of 85,000 annually for the next two years and 50,000 annually thereafter for replacements. During the summer, the Forest officials on the Salmon will probably complete a plan and estimate of the timber on this watershed for use in meeting the probable annual demand.

District Assistant to the Solicitor Lawson has recently been transferred to the Denver office to fill the place made vacant by Assistant to the Solicitor Trowbridge's late resignation. Mr. Lawson has been in District 4 since December 1, 1914, and has during these years performed faithfully and efficiently the duties coming within his jurisdiction. Mr. Lawson has many friends in this District to whom the news of his going will come as a surprise. Although we are sorry to lose him, we congratulate the Denver office on securing the services of so able a lawyer as Mr. Lawson. He will leave about May 1.

Assistant to the Solicitor C. E. French from the Washington office arrived today to succeed Mr. Lawson in this district.

A meeting of thirty-one of the clerks of the District Office was held on April 20 in the stenographic section, to discuss the movement toward gingham aprons and overalls for work wear. The proposal to dress in a gingham uniform was defeated, it being shown that gingham was not so cool as some other materials for summer, and was more difficult to launder. The women pledged themselves, however, not to buy a single new article of wearing apparel until June 1, on which date they will again meet and limit the price they will pay for summer dresses. A penalty has been proposed to deal with those who break the pledge and are caught at it.

"The deer have wintered well and seem to be quite numerous, the sage hens are so thick out on some of the bare ridges, when they rise to fly, the clouds are black with them, the grouse seem to have left the pines, I presume on account of the late snows having been wet and covered the pines over so that they look like ice-cream cones. Now if we had a few nut sundaes and a milk shake we could imagine we were living in the city."

Ranger Butler, Humboldt.

The District Forester recently issued a term permit for a club house in Oak Creek Canyon on the Fillmore Forest. This is the first permit of its kind issued on that Forest.

At a recent meeting of the Scout Masters of Salt Lake City, Deputy Supervisor David Arrivee of the Wasatch Forest gave an illustrated lecture using the set of slides "Manual Training and Forestry." As a result of this talk and others by Mr. Scott and Mr. Parkinson before this organization, several requests have been made by Scout Masters for the use of the slides at their troop meetings. Supervisor Parkinson states that one set has already been loaned.

District 5 - California District

Siskiyou and Shasta Counties, at the request of the Northern California Counties Association, have agreed to furnish metal posts for the Forest Service signs which are to be erected in the Shasta and Klamath Forests this spring. About 140 such posts are to be ordered as soon as specifications are furnished, and as soon as the posts are delivered the work of signing the roads and trails will commence.

The annual outing trip of the Sierra Club will be through the Sierra this coming season. Present plans call for 14 camps, starting and ending at Huntington Lake. The intervening camps will probably be located at Hot Springs, Perfection Meadows, Piute Creek, Evolution Lake, Little Pete Meadows, Palisade Creek, Simpson Meadows, Island Camp, Tehipite, Gnat Meadows, North Fork Kings River and Helms Meadow.

After 8 years of litigation with the Forest Service, the "Amazon Miner of Millard Canyon" has consented to leave the canyon together with her flock of goats. On April 10 three Forest Officers who were engaged in laying out lots here, suddenly heard a commotion above them in the canyon, and upon investigation found two men attempting to lead two large goats while the "Goat Lady" urged them on. The goats were branded "R. H. C." and "H. P. D.", and while H. P. D. patiently followed his leader, R. H. C. balked and refused to leave the canyon. He was finally dragged past, but persistently refused to be led. Another goat bearing a brand similar to the initials of the Assistant U. S. Attorney is still at large in the canyon, as is also the "Goat Lady."

This has been an interesting case. Eight years ago the "Amazon" moved into Millard's and picked out 2,000 acres of land which she immediately withdrew from the Forest Service. The Forest Supervisor was then notified of the "secession" and warned against using or giving permits for use of this land. After the mining locations were cancelled by the Interior Department, suit was instituted in the Federal Court to evict the fair lady and her goats. Upon her promise to leave by April 10, no action was taken by the U. S. Attorney, but the "Rose of the Wilderness" has not yet seen fit to leave. During the past few years she has succeeded in getting the "goats" of several Forest Officers, and these goats seem reluctant to leave the Forest.

We point with pride to the fact that both the new Forester and the Associate Forester were once Supervisors of the Sequoia Forest. It is evident, quite evident, that California in general and the Sequoia in particular have proved excellent "spring training grounds" for the Service.

Mr. Fair's first exhibit, shown at the Civic Auditorium during the recent Automobile Accessory Exposition, consisted of three models - the camp fire scene, and the two sheep models, our old friend the coyote, and a realistic life size camp scene with tent and fire place. Pine and fir trees and needles received from the Shasta and Eldorado were unusually well arranged and the camp fire, which was given the right color by a concealed red light, was made still more attractive by a pot of actual coffee, kept boiling by an electric immersion boiler. The fragrant aroma excited considerable attention and help very materially in attracting visitors. Exceedingly favorable comments from both the management and the public were received.

This little exhibit - for it was a small and simple affair - has already brought three tangible results. After seeing it, the Director of the Oakland "Safety-First" campaign gave us a very cordial invitation to enter a camping float in a parade on April 10. A big, three ton Packard truck with driver was loaned us by the Bureau of Public Roads, the Tahoe furnished more trees, and a regular forest scene, with pitched tent and honest to goodness camp fire, fry pan and coffee pot, greeted Oakland's inhabitants.

The second invitation was to exhibit at the St. Francis Hotel at the "Wild Flower Fete on April 22-24. Here the Civic Auditorium exhibit was duplicated, with trees again furnished from the Eldorado. Additions furnished by the Sierr consisting of blue-jays, (a permit to secure them was obtained from the F. & G. Commission) which were mounted by Mr. Fair and placed at strategic places. The camp fire here was one which had been properly extinguished before the camper went fishing, so the jays were perched on tent and fry pan.

The third result is an important one, and it marks a big departure in this and, in all probability, in other Districts. Summarized, it comes down to the fact that the Service is to be paid good hard cash for exhibiting its own material under a cooperative agreement.

A deal has been closed with the H. O. Harrison Co., agents for the Dodge, Hudson and other cars. The Service agrees to prepare and install in the H. O. Harrison show rooms in seven important California cities, a camping scene, life size, with a big 10 x 14 painted background. "Care with the Camp Fire" is the lesson to be put over and secondarily the idea "Camp in the National Forests." It is to be pure Forest Service Stuff, no advertising of any kind in the scene. The Company guarantees the Service $400 cold hard cash. The properties belong to the Service, which has full control of them, and at the end of the circuit, we may do with them as we see fit. By varying the foreground they may be used over again in other cities or may be used with other material at fairs, etc. It is hoped to apply the same idea to other agencies.

Along the State Highway in the Cajon Pass on the Angeles is the most uniq public camp ground in California if not in the entire country, and it is being constructed entirely through cooperation, the funds being furnished by many individuals, firms, associations and municipalities.

Located partly on Forest Land and partly on land owned by the Santa Fe Ry Co., the camp covers an area of some 6 to 10 acres, and the construction is al of stone, iron and cement, no temporary construction being allowed.

Along the highway is a stone wall, with openings for roadways, and about the center of the wall is a masonry monument, surmounted by an iron flag pole.

Scattered through the grounds are 40 concrete tables, with benches, and these tables will seat from 12 to 30 people each.

About a dozen stoves (or fireplaces) are scattered over the camp. These are also of masonry, as are the pump platforms, latrines, incinerator, and other improvements. A combination rest room and caretaker's house, also of masonry, is now under construction, and a store and gasoline station, adjacent to the camp and run under special use from the Forest, will be of constructi in keeping with the camp.

While no advertising is allowed in the camp, a neat bronze plate giving t name of the donor is set in every table, fireplace, building, etc., and lends interest to the place.

From investigations made on the ground, I estimate that over $15,000 has been spent on the camp to date, and that when completed it will cost at least $25,000.

As being of interest in showing the possibilities in the way of raising c-operative funds, I cite the fact that one structure on the area was contribute by the 36 section foreman on the Santa Fe between Los Angeles and Needles, eac one of whom contributed $5.00.

It is estimated that this camp, the first one reached after crossing the Mojave Desert, will be used by from 25,000 to 50,000 people annually.

The Southern Edison Power Co. has decided that the timber on their holdings south of Shaver will be cut only in connection with nearby Government timber an under the same conditions as those contained in our timber sale contracts. Thi is a most interesting and important decision and is indicative of what we can expect in the future from corporations and individual timber owners whose interests do not demand a method of exploitation which does not concern itself with the future of the forest.

District 6 - North Pacific District

Oregon is to have another fish hatchery, to be located on Salmon Creek, in the Cascade Forest, near Oakridge. According to the special use permit agreed upon by the District Forester and the State Fish and Game Commission, islands of the creek bottom are leased indefinitely to the Fish and Game Commission, to be occupied by the buildings, ponds, and races of the hatchery. The Forest Service reserves the right to maintain trails and telephone and pipe lines, and also 10 acres easily accessible to Willamette Highway as a camp ground. The permit safeguards the scenic beauty of the area, and a proviso has been made that the buildings shall be constructed with reference to their effect upon the natural beauty of the surroundings as well as convenience for fish hatchery purposes. It is understood the hatchery will have a minimum capacity of 10 million trout fry annually, and may be developed to several times that amount.

A community hut, said to be the first of its kind in the Northwest, has been established by The Baptist Church within the Siskiyou Forest, at Powers, Oregon. It affords a practical example of social service to woods-workers, and will doubtless be a strong influence for an improvement in the living conditions in logging camps.

A. G. Jackson has to date addressed the student bodies of Albany and McMinnville Colleges, Pacific and Willamette Universities, and the Oregon State Normal, on the protection and use of Oregon's forests. Other talks will be made through Oregon and Washington by Forest officers, continuing through Forest Protection Week, May 23-29. The five or six hundred ministers of the two States have been sent carefully selected "Thought Starters" and other fire information, with the request that they might make forest protection the subject of a sermon on May 23.

Game statistics compiled here in 1919, showed 1,500 antelope on the Fremont Forest and 40 on the Deschutes; and 6,883 elk on 17 Forests of the northwestern District. They indicated that elk are decreasing on the Columbia, Colville, Santiam, and Siskiyou; holding their own on the Malheur and Umpqua; and increasing on the Cascade, Crater, Deschutes, Minam, Olympic, Rainier, Siuslaw, Umatilla, Wallowa, Wenaha, and Whitman.

Of the Wallowa elk, 110 have refuge in Billy Meadow Experiment Pasture, now administered by the State Game Commission but formerly used by the Forest Service in running sheep in a coyote-proof enclosure. There were 57 elk in this herd in 1915, when the Commission took over the pasture from the Biological Survey, the extra 53 being natural increase. Three carloads have been taken from the pasture and sent to points in Oregon.

That the campaign for a national forestry program is receiving recognition is shown by the following paragraph from an editorial in the Portland Journal of April 17:

"When 'The Journal', along with other believers in protection, conservation, and reproduction of forests, urged a national forest policy there was derision as well as approval. Now, at least, there is a reforestation policy affecting national forest lands. And there is assurance that a steadily gaining public sentiment will direct the establishing of a general policy affecting the timber supply before many more years have passed."

The value of the Forest Service as a training school is well illustrated by Ranger Henry C. Deutsch, who entered the District Office as messenger boy in 1913, and who resigned April 22, to accept a responsible position with a lumber company. After serving as a messenger in the District Office he decided to study forestry, entered the forest school at the Oregon Agricultural College, worked during the summers on the Santiam, Siuslaw and Whitman Forests, on timber survey, land classification and grazing reconnaissance, taking the ranger examination in 1914. He was offered a position on the Coconino Forest, Arizona, where he served almost two years, gaining experience as a district ranger, and also in scaling and grazing reconnaissance. He volunteered in June, 1917, for the 10th Engineers, went to France in September, 1917, serving in Major Guthrie's company. On his return to the U. S. and discharge, he reentered this District as ranger. He has now resigned to accept the position as assistant logging engineer for the Alsea Lumber Company, at a salary of $160 per month and expenses.

The Standardization Committee representing the Idaho Timber, Western Pine, Washington Forest Fire, West Coast Lumbermen's, California White and Sugar Pine, and Oregon Forest Fire Associations, and a joint committee of California interests, met in Portland, in the offices of the Western Forestry and Conservation Association on April 22, to outline their position on a national forestry policy.

The delegates agreed on a platform making provision for acquirement by Federal and State Governments of larger forest areas, mainly cut-over lands; condemning and buying lands that private owners refuse to sell or keep in timber; reimbursement to States for loss in taxes; assistance in putting through State legislation for greater forest protection; national land classification; larger federal appropriations for fire prevention; turning over Army facilities for forest protection;

a policy of marketing publicly owned timber that will tend to stabilize lumber prices; recognition of the Forest Service as leader of the public forestry thought and effort; cooperation of private, state, and federal forest agencies; and securing of a sympathetic attitude from the public.

The Committee expressed belief that to the timber industry of the West the protection from fire of the forests and natural reproduction is preferable to artificial methods.

E. T. Allen, secretary of the Western Forestry and Conservation Association, left soon after the meeting for Chicago, where he presented to the American Logging Congress the policy adopted by the Standardization Committee of the Association.

Such resolutions as the following are the kind that put the operate in cooperation! These were passed on March 27, 1920, and are signed by the president and secretary of the association.

"RESOLVED:- WE the Prairie City Stock Association, hereby pledge our hearty cooperation with the Forest Service, in protecting from fire the timber and forage crop on the Malheur and Whitman National Forests.

1st. All members of this Association are hereby instructed to report to some member of the Forest Service, all smokes or other signs of fire discovered by them, within the bounds of the Malheur or Whitman Forests, or on lands adjacent thereto, at the earliest possible time after discovery, no matter what inconvenience it may cause the individual member, so long as there is no danger of bodily harm to the member in the performance of this duty.

2nd. The Ranger in charge of the Crane Prairie Ranger District is hereby authorized to use the employees of any member or members of this Association, or hire such additional help as he deems necessary to suppress any fire that may occur on either the Crane Prairie, Flag Prairie or the Logan Valley cattle and horse ranges, if in his judgment the fire can be extinguished with less expense and with less damage to the timber and forage crop, by so doing.

3rd. The President of this Association is hereby authorized to instruct the Forest Supervisor of the Malheur Forest to suppress all fires upon the Crane Prairie, Flag Prairie or the Logan Valley cattle and horse ranges during a given period, if it is possible to do so without the aid of our members at a busy time.

4th. Any expense incurred under the second and third clauses of this resolution shall be reported by the Ranger in charge to the Supervisor and he in turn shall report the bill to the Secretary of this Association. All bills thus reported shall be paid by the users of the range on which the expense was incurred.

5th. Any member of this Association or any person holding a grazing permit on either the Crane Prairie, Flag Prairie or the Logan Valley cattle and horse ranges violating any section of the above resolution shall be deemed a trespasser and the Forest Supervisor is hereby asked to proceed accordingly.

The Secretary is hereby instructed to send a copy of this resolution to the Forest Supervisor of the Malheur Forest, and a copy to the ranger in charge of the grazing districts herein specified."

District 7 - Eastern District

Near the end of our timber sale contracts, among the clauses telling the purchaser of the terrible things that will happen to him if he is not good, we find this sentence: "This agreement shall not be assigned in whole or in part."

On one of the Southern Appalachian Forests there is a timber sale which has been rocking along for the past two or three years in the usual way. The purchasers, according to custom, have been failing to cut at the rate prescribed in the contract and from time to time it has been necessary to extend the limit of periodic cut as well as the date for the completion of the operation. This spring it became necessary to notify the purchaser that no further extensions could be made and that the next failure to keep up with the periodic cut would necessitate the cancellation of the contract and the drawing up of a new one. The purchasers knew full well that this would mean a material increase in the stumpage prices due to marked changes in values since 1917, and got busy.

Upon visiting the sale area one morning the Supervisor found new men in charge of the work in the woods who said they represented another company that had taken over the interests of the purchasers, who had assigned the timber sale agreement. The Supervisor, before he could recognize their rights in the woods insisted that they show evidence of their authority. Certain legal papers and instruments were produced which were held by the local U. S. Attorney, to be plainly an assignment of the contract. Orders were immediately issued to stop all work in the woods since the men on the logging job were plainly not in the employ of the parties who had signed the timber sale agreement, but of another concern which the Forest Service could recognize only as a trespasser.

One of the original purchasers immediately hot-footed it into the District Office and insisted that he and his partner had no intention of throwing up their contract or abandoning the sale; that the people on the ground were his agents; that the legal instruments interpreted as being an assignment were not intended as such, either by his partner or himself, or the alleged assignee; and that the papers were drawn up merely to enable him and his partner to get sufficient funds to enable them to prosecute their operations at the double speed necessary to comply with their contract.

It was held by the legal lights of the Service that the District Forester had his choice of recognizing these assignment papers or not, as he chose. He could hold that an efford had been made to assign the contract and therefore declare the contract null and void, or since the papers could have no force or effect anyhow and gave the alleged assignees no rights in the contract, which the Forest Service need to recognize, he could simply ignore them and continue to do business with the original purchasers in the old way. Since the purchasers and the alleged assignees both insisted that the papers were not meant as an assignment but simply as security for a loan, and since the purchasers protested that they intended to go ahead and put forward their best efforts to comply with the contract, and since the alleged assignees insisted that they had no intention whatsoever of trying to assert any rights as assignees, and since it was for the best interests of the Forest Service and of the Government to let the original purchasers go ahead, the District Forester decided accordingly and the purchaser caught the next train back to the job.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

May 10, 1920.

Rich Man; Poor Man

Which District has the most funds for its work and which has the least? Should any District get more than it does of our total available funds and if so how much more? Should any District get less and if so how much less?

These are the questions which the Branch of Operation is trying to answer by working over all the available information. It would be very satisfactory if we could make a redistribution of allotments and do so with the knowledge that we had good solid reasons for the changes made--reasons which not only satisfied the Forester but which would be understood and appreciated by all field men.

The facts bearing on comparative allotments are rather more complex and confusing than would be expected. Every District (with the possible exception of District 7) has some expenditure which the other Districts may point to as a "luxury" which they themselves can not afford. It is one of the curious human facts of the business that each District sees the other fellow's "luxuries" quite easily but has the greatest difficulty in seeing its own. District 3, for example, is firmly convinced that it is the financial step child of the Service because Mr. Ringland years ago got a "bug" for economy. The District actually has less funds than any other except District 7, the totals for G. E., G. A., and Statutory (1920) running as follows:

District	7	$190,000
"	3	499,000
"	4	565,000
"	2	618,000
"	5	678,000
"	6	712,000
"	1	919,000

But all the available facts show that District 3 is as well if not better provided with funds for both protection and administration than any other District; that it has had several things in its overhead that the other Districts would call "luxuries;" and that with the cost of protection roughly deducted the District has nearly as much money per acre for administration as any other; the costs per acre for administration alone running as follows, using 1921 tentative allotment as a basis:

District	7	$.065 per acre
"	2	.025 " "
"	1	.023 " "
"	3	.022 " "
"	4	.019 " "
"	5	.019 " "
"	6	.018 " "

All Districts look with interest if not with acquisitiveness at the comparatively large sum allotted to District 1. District 1 in turn points, for example, to District office overhead on which they believe other Districts spend more money than District 1. District 1 is said to have gotten more educational fire protection material in newspapers than any other District and it has done this without any special man for that purpose while most of the others have one educational man and some Districts have two.

The facts do not quite bear out District 1's contention that its overhead is low, the comparative total numbers of Assistant District Foresters, Aids to Assistant District Foresters, clerks in District Office, draftsmen, messengers and laborers running as follows:

District	6	72 people
"	5	71 "
"	1	69 "
"	2	64 "
"	3	62 "
"	4	49 "
"	7	10 "

It is true, however, that the District Office in 1 has a bigger job in terms of men supervised than any other District, its contention of low overhead being entirely correct to that extent. The number of field men supervised for each District office supervisory man is as follows. Guards are converted into yearlong men for this comparison.

District	Number of men Supervised
7	26
1	19
4	13
6	13
2	12
3	12
5	11

District 2 has a man on Ranger correspondence courses and has smaller ranger districts and forests than any other District. District 4 has a special man on game, and District 5 has a special man on field personnel. District 6 has the largest specimen in captivity of that monster called District Office overhead.

On the other hand District 2 probably has achieved better business management than any other District; District 4 handles an enormous grazing and community development job with fewer men for a given volume of administrative work than any other District; District 5 has the largest area per administrative ranger; and District 6 handles a protection job which is second in importance only to that of District 1. Moreover, considering practical difficulties and comparative advantages, District 6 perhaps gets better results from its protection expenditures than any other District.

One conclusion at least is warranted--that the most careful study is necessary in order really to get to the bottom of our allotment problem. Furthermore, it is reasonably certain that no short-cut can be found to the correct allotment of funds by the use of formulae or generalizations about comparative volume of business in different Districts. We must work inductively, patiently determining what jobs are to be done on the Forests, how well they should be done, what amount of man days should be provided for a given amount of work, etc., etc.

Who knows how much money ought to be appropriated for any District or Forest? What reasons has he for claiming that a certain sum is required? We must proceed to build, bit by bit, fact by fact, and experiment by experiment, such a mastery of the economics of American Forestry that we can stand before Congress and the public and make them believe we are right when we say we should have certain sums of money and give our reasons for believing that the specified sum should be spent and that we can supply the skill and experience necessary to enable us to use that sum advantageously in the public interest.

- Roy Headley.

Secretary Approves Modification of Timber Sale Policy in Alaska

Convinced that the Department of Agriculture must do everything in its power to help meet the present news print scarcity and to develop the resources of Alaska, Secretary Meredith has approved what is expected to be an important modification of the timber sale policy on the Alaskan Forests, as follows:

1. The Forest Service will offer firm contracts for sufficient timber to supply a proposed paper mill for 30 years; where additional timber is available which may properly be reserved from other present disposition, the Service will offer, as one of its contract stipulations, to reserve from sale additional stumpage up to a maximum of 15 years' supply, pending the completion of the first contract; and at that time to appraise the reserved area and place it upon the market. Any such reservation will be so located as to be available for other operators as well as the original contractor so that opportunity for competition will exist. The character of the Alaskan Forests, which lie in a narrow belt along the coast, will help in carrying out this policy.

2. Contracts will provide for the reappraisal of stumpage prices at intervals of 5 years after cutting begins. In addition to fixing the price for the first 5 years, however, a scale of prices will be named which in no event will be exceeded in the reappraisal covering the second 5-year period. The possible maximum prices for the second 5-year period should ordinarily be about 2 1/2 times the rate for the initial period. The purpose of this provision is to fix a maximum liability for the cost of timber during the first 10 years of the enterprise. In adopting it, the Department would make the immediate object of its policy in Alaska to get paper mills established rather than to obtain the maximum possible receipts. After the first and most critical 10 years in the life of a new enterprise of this character the need for limiting the liability for cost of raw material should be less and the Department may then properly apply the reappraisal

clause without such restrictions. The reappraisal rates in pulp wood contracts shall be based on the current value of corresponding timber in southeastern Alaska, full recognition being given to the quality and accessibility of the timber included in the particular contract and to any other physical conditions affecting the operation of the purchaser.

It is believed that the modified policy will have a considerable effect in hastening the establishment of paper-making plants in Alaska. In the past applicants who have the financial backing have felt that the existing regulations did not make it possible to offer a sufficient amount of timber to justify the direction of paper-making plants. Plants of this kind will require, it is estimated, an initial investment of from $2,000,000 to $4,000,000, and must of necessity be assured sufficient raw material for relatively long operating periods. Not only is the initial investment large, but there are a number of other disadvantages on account of the inaccessibility of the territory, transportation difficulties, and labor conditions, which have deterred conservative business men from being willing to invest their money in a paper-making plant in Alaska. Now that a 30-year supply of raw material can be covered in the original contract and a 15-year supply be reserved for probable use by the original purchaser, it is hoped that it will not be long before some company with strong financial backing will establish a plant in Alaska.

National Chamber of Agriculture Proposed by Secretary Meredith

A National Chamber of Agriculture which would provide for an expression of opinion by the agricultural interests on public matters in the same way that the National Chamber of Commerce provides for an expression of opinion from the business interests of the country is advocated by Secretary Meredith. The Secretary feels it is most important that the agricultural interests should have some means of expressing their views on the various questions which are coming up for attention. He feels that a national organization would be able to determine accurately what the real sentiment is on matters which are under discussion and that it would be able to secure far-reaching results.

Don Johnston

So Don Johnston has quit!

Every young chap in the Service should get an inspiration from Johnston's record. His middle name is "Hard work" and he is cursed with an ambition to climb higher.

Finishing a course in the Ohio State College in which he specialized in shop work with the Westinghouse Company, Don Johnston, the wanderlust strong in his heart, struck out with a determination to make a place for himself somewhere in the West, without the influence or aid of friends who could undoubtedly have helped him establish himself almost anywhere he chose to go. He arrived in Prescott early in 1906 with about $25 in his possession, his total outfit consisting of the suit of clothes he was wearing and a moderately sized grip about half filled with the rest of his modest apparel. Boylike he put up at the most expensive hotel in the town, and Prescott was by no means the cheapest place to live in in those days. Realizing that his funds would not last long he decided to investigate the possibility of obtaining work at the big mining camp at Jerome, where electrical machinery was used.

Wearing a hardboiled hat, white shirt, and other raiment of the same sort, he applied to the superintendent of the mines for a position as an electrical engineer and was promptly informed they were turning down carloads of his kind every week, "and anyhow the United Verdi isn't a finishing school for half-baked kids from eastern colleges." Determined to find work of some kind or other he hung around the camp a day or two longer looking for another job, his funds dwindling at an alarming rate. Finally he went to the superintendent again and told him frankly that he had to find work of some kind, no matter how hard it was. The superintendent told him they had no work for him or any one of his kind. "What do you consider my kind?" queried the future forester. "A tenderfoot," snapped back the superintendent. He told Johnston, however, that if he really wanted work he might see the yard superintendent. Still wearing his hardboiled hat, white haberdashery and lowcut shoes, he applied to that individual, who told him to go out and report to the foreman of the coal gang. The superintendent told Johnston afterwards that he had no idea he would do so but wanted to try him out. With a determination that well illustrates Johnston's character he went promptly to the foreman and, as he puts it, "I got a job with a lot of other Bohunks unloading coal."

Johnston's description of his mental, physical, and other condition at the end of a 10-hour shift at this sort of work is distinctly worth while. His first two days' salary was invested in a pair of hobnailed shoes and some heavy leather gloves, the rest of his rigging being replaced with more satisfactory material as he earned the wherewithal to buy it. His story of life in a miner's boarding house in the big copper camp would bring tears to the eyes of a cliff dweller's mummy.

In the meantime while he was shoveling coal, cleaning up around the yards, etc., the yard superintendent had his eye on Johnston and questioned him at considerable length about his experience in the Westinghouse shops. One day one of the underground foremen remarked in Johnston's hearing that they were having some trouble with one of the electric motors and could find no one competent to fix it. Johnston said, "Let me have a try at it." The foreman, willing to try anything once, sent him underground where to his great joy he discovered that the machine was the same type he had worked on in the Westinghouse shops. He soon had it patched up and in running order. That immediately boosted him from a $2.00 a day man shoveling coal to a $4.00 per day place as an electrical engineer.

Not long after this Johnston was selected to install and operate the machinery on some claims the Company had purchased over in the Tonto basin. For this he was paid $5 per day and his board.

By this time, however, Johnston had developed a mad desire to become a forest ranger. The mining people urged him to stay with them in vain. What was $5 a day in a mine compared with a ranger job and a fat horse to ride over the mountains; he argued. He took the ranger examination and in 1908 received his first appointment on the Prescott as Forest Guard at $60 per. His ability was quickly recognized and he went to the Gila as deputy supervisor in 1909, was made supervisor of that Forest in 1911, to the Santa Fe as supervisor of the combined Pecos and Jemez forests in 1913, and as Chief of Operation in District 3 Office in 1917. In 1918 he went to the Madison Laboratory in charge of Operation, and in 1919 to San Francisco as Assistant Forester in charge of Operation. Not a bad record for 12 years.

He now leaves the Service to enter the naval stores business in Florida. Everybody in the Service wishes him well and feels sure he will make good in his new work and continue on his upward course.

- W. C. Barnes.

Uncovering New World Champions

Any Forest officers who have ambitions for fistic fame may now begin their fight for recognition without many of the hardships usually attending the path of the promising "pug." The International Sporting Club, an organization said to be composed of wealthy men who are interested in the introduction of clean sports, particularly boxing, in this country, are on the lookout for 40 or 50 promising pugilists who may be developed into championship material. The club has requested the various lumber associations to assist it in locating lumberjacks who want to try out their ability to give and take punishment. According to the announced plans the club will pay such men as are selected at least 25 per cent more than their present wages, will pay all training expenses and provide quarters. The candidates will be given a year's training under such well known men as Jack O'Brien, Steve O'Donnell, Sam Fitzpatrick, and Freddie Walsh, who will bring out any good points that the would-be fighters may have. At the end of a year's time the men will be free to continue fighting as amateurs or go into the professional game under whatever management they choose to elect.

The men are to be chosen from a number of different industries. The lumber industry is one of the first five to be cruised for promising fighters.

Grazing Permits To Persons Convicted of Crime

Ever since the Forest Service began its administration of grazing matters on the Forest ranges the stockmen have been very insistent that permits should be refused to men who were convicted of stealing stock. Many of them felt we should go so far as to refuse permits to those who were even under suspicion of being cattle thieves in cases where they held particularly striking reputations for activity along that line. While the men in the Branch of Grazing were in hearty sympathy with this feeling on the part of the stockmen, nevertheless as administrative officers they could not but recognize certain inalienable rights to which even the commonest cattle thief is entitled, one of which is to not be punished twice for the same offense. Moreover it was not considered a part of our duty to act as judge and jury in such cases and refuse to issue permits to men merely under suspicion. This has been the attitude of the Service for many years, although the stockmen generally felt it was not giving them a square deal.

In one of the districts some years ago a man was tried, convicted, and sentenced to the penitentiary for stealing stock. During his absence in the penitentiary his wife continued to take out a permit and looked after the stock. After he had served his four years sentence he returned, resumed his place on his ranch and the permit was continued. The stockmen insisted that in this case the man should be refused a permit and not forced upon them as an undesirable neighbor using the ranges on which others were grazing their stock. The Forester stuck to the established policy and refused to deny him a permit.

Recently the matter came up to the Forester from an entirely new angle. The Tuolumne Livestock Association on the Stanislaus National Forest adopted a special rule under the provision of Reg. G-3, which, briefly, requires the Forest Service to "hereafter deny grazing permits to any such persons, firm or corporation who have been convicted for violation of any of the laws of the State of California enacted for the protection of persons engaged in the business of raising or grazing livestock in California." In order to make sure that the Forester's previous position was right, this question was put up to the Solicitor for the Department for his opinion. Under date of April 10, Mr. Williams advises the Forester as follows:

"The only authority for the adoption of such rules is that found in the regulation above mentioned. (Reg. G-3), and the only provision in that regulation which should seem to afford any basis for the rule is the authority to make rules "for the enforcement of State livestock laws," and that is limited to Forest lands, while the rule proposed is not. Moreover, the proposed rule is not one for the enforcement of the State livestock laws. By its terms, it is effective only where the law has already been enforced by the State officials. Furthermore, it would apply even though the party had stolen stock at some point far distant from the National Forest. It is therefore clearly not authorized by the regulation.

It is also objectionable in that it would impose an additional penalty for the violation of a State law. It is fundamental that no man can be twice lawfully punished for the same offense. Ex parte Lange, 18 Wall, 163, 168. Also, the civil rights of one convicted and sentenced under the laws of a State are only suspended during the term of his imprisonment, and are, in the absence of special statutory provisions to the contrary, restored to him at the expiration of such term. 8 R.C.L. 257: In re Nerac, 35 Cal. 392. Hence, the mere fact that a party has once stolen "cattle ought not to prevent his obtaining the benefit of the regulations, because he may give no further trouble in that respect."

This seems to effectually dispose of the whole question and justifies the action taken on such requests heretofore.

- W. C. B.

AIRPLANE OBSERVERS PHOTOGRAPH FOREST FIRES

"During the past week fire has broken out in various parts of the forest reservation at Camp Bragg, North Carolina.

The reservation, an area of 200 square miles, is covered with scrub oak and pine trees. The fire started on the outskirts of the area and increased in intensity. In order to keep a watch on the progress and location of the forest fire the Commanding Officer organized two patrols to fly over the entire reservation daily and photograph the burning area.

The only way in which information could be gained quickly was by the use of airplanes because of the fact that the reservation is nearly inaccessible due to heavy undergrowth."

- Air Service News Letter.

Kentucky Resigns

The office of State Geology and Forestry of Kentucky has been abolished by the legislature and all the property belonging to that office has been turned over to the Commissioner of Agriculture. The legislature appropriated $3,000 for the salary of a state forester and only an additional $5,000 for all other expenses. The Commissioner of Agriculture is undecided about appointing a state forester to handle such a small appropriation and the office is at present vacant, Mr. Barton, who has formerly held the position having resigned.

It is not known what effect this action of the legislature will have upon the Weeks Law fire cooperative agreement with the State.

Reducing Sheep Permits on the Manti

For some time past the sheep permittees on the Manti National Forest have had an appeal before the Secretary of Agriculture objecting to the action of the District in making a reduction of 25,000 head of sheep in the number grazed heretofore on that Forest. This reduction was agreed upon after a careful reconnaissance of the Manti Forest had been made by competent forest officers. Their reports indicated quite clearly that the ranges were not doing as well as they should, that certain forage plants were apparently disappearing, erosion was setting in, and the only remedy lay in a reduction in the number of sheep and a better distribution of the stock.

To this end, in the fall of 1918 the permittees were informed that 25,000 head of sheep would be taken from these ranges -- 13,000 head for the grazing season of 1919, and 12,000 head for the grazing season of 1920, in order to give the forage a chance to recuperate. The permittees made some objection to the cut at a meeting with the District Forester held in Ogden in 1919, but after considerable discussion apparently the situation was accepted and they made no further protest.

Early in 1920, however, they took the matter up again, protesting to the Secretary against the enforcement of the 1920 reductions. After careful study the Secretary sustained the District Forester's decision. One of the chief complaints was that the association was not given an opportunity to be heard by the local forest officers in reference to the proposed decrease. In the Secretary's decision this objection was met by the following statement which is somewhat interesting from our point of view:

"The records show," says the Secretary, "that the Association did not seek an opportunity to discuss this matter with the local forest officers," but in fact when notified in the usual way as to the reductions for the 1920 season, it went over the heads of the entire Forest Service and the matter was referred to Senators King and Smoot in Washington, who were requested to take the question up with the Department. "That is to say," the decision continues, "it is clear that the Association itself chose other means to voice its objection to the decrease authorized than those provided in the regulations."

The Secretary evidently feels that parties making appeals must proceed somewhat closely in accordance with the regulations so that their matters may be handled in an orderly way.

One of the other points which the Association raised was the question as to the value of the reconnaissance work. Practically, the permittees set themselves up as better judges of the carrying capacity of the ranges and their actual physical conditions than they considered the properly qualified forest officers to be. This point also, the Secretary decided negatively. There is no question but that the Manti has had more field investigations, more serious consideration, more study and more general all round discussion as to its grazing resources, than any other four Forests put together.

The entire decision sustained the action of the Supervisor, the District Forester, and the Forester in this case without any question, and established some very satisfactory basic points for future decisions along these lines.

Ex-supervisor A. W. Jensen represented the Manti Wool Growers Association in the appeal before the Secretary.

- Will C. Barnes.

Let 'em grow up together

According to the American Lumberman a tree-planting corporation organized in the State of New York has a requirement for the purchase of stock in the corporation that the stockholder should have a child* ten years of age. The idea is, of course, that the trees and the children will grow up together.

Longleaf Pine and the Razor Back

In connection with his trip through the Southern States Mr. Zon spent several days with Mr. Hardtner on his forest at Urania, Louisiana. The experimental work which has been carried on on this tract in cooperation with Mr. Hardtner is the most significant work of the kind that has been done in the State and, perhaps, anywhere in the Southern pine region. The experimental areas have now been established 10 years and are showing some striking results. One of the most interesting features on this tract is the comparison of reproduction on adjacent areas, of which one is fenced to keep out the hogs, and the other open to them. Practically irrespective of the number and character of the seed trees which were left on these areas at the time of logging, the fenced area now has a splendid stand of reproduction of longleaf pine. On the unfenced area; however, there is no reproduction since it has been destroyed by the hogs as fast as it started.

Not Guilty

Recently the Forester has received through a Senator representing a northwestern State a large number of letters in which the Forest Service and forest officers handling grazing matters on several National Forests were severely criticized. Especially were they charged with discriminating against small settlers and stockmen and favoring large permittees. Among other things they made specific charges of bribery and the use of influence and money to obtain permits. The Senator interested insisted on an investigation by a member of the Washington office and this was readily agreed to. In order to secure some basis for making the investigation the individuals were requested to furnish specific dates, names, and instances. In reply a statement came from one of the parties which referred to a case where an applicant for a permit had said the only way he could get a permit on the Forest was to pay a certain individual $100 to take the matter up with the District Forester, with the understanding if he got the permit he was to pay him $150 more, making a total of $250.

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*under

On investigation it turned out that the party to whom this money was paid is an ex-forest officer who offered to intercede with the District Forester and try to secure a reversal of his decision not to issue a permit. The party making the charge evidently did not know that this person was no longer a member of the Forest Service force.

It is also interesting to know that the ex-forest officer made a sturdy effort to secure the permit for his client but failed, the District Forester refusing to reverse his decision. "Money talks" is an old saying but in this case it did nothing else.

– W. C. B.

Mitchell Gets Singed

All those persons who think that hot forest fires are confined to the West have another guess coming to them, according to J. A. Mitchell. Mr. Mitchell, much against his will, no doubt, was compelled to help fight a forest fire down in the western part of Virginia during the week of April 23, which disabused his mind of any ideas he may have had that fires in the eastern Forests are easy to handle. "I thought I had seen pretty hot fires in the West," Mr. Mitchell writes, "but this one was the hottest I have ever run up against."

Washington Notes

J. G. Peters left May 5 for West Virginia, where he goes to attend a meeting of the various protective associations of that State in connection with the Weeks Law cooperative protection work. While in West Virginia Mr. Peters will look over what is commonly known as the "Monongahela National Burn."

Mr. Sherman has been appointed to represent the Department of Agriculture on the committee for inquiry into Alaskan affairs recently designated by the Secretary of the Interior, and left on May 5 for Seattle where the committee will hold hearings. Mr. Sherman's appointment on the board was the result of a request by Secretary Meredith, made at Col. Greeley's suggestion, that the Department of Agriculture, as one of the departments which is most interested in Alaska, should be represented on the committee.

The hearings in Seattle will give an opportunity for all persons who object to the present method of handling Alaskan affairs to voice their protests. It is exceedingly fortunate that the Department of Agriculture can have on the committee a man like Mr. Sherman, who is familiar enough with conditions in Alaska to see that all of the facts are brought out in each case.

The committee is concerned at the present time primarily with the transportation facilities of Alaska. Later on it is expected that the development of the resources of the country and the correlation of federal activities will be taken up.

Forest Products Laboratory Notes

T. R. C. Wilson of the Section of Timber Mechanics, will leave soon for San Francisco, Cal. where he will give a talk before the National Foreign Trade Council on boxing and crating. He will use the Laboratory box reel.

C. V. Sweet, Section of Timber Physics, has been down to see L. V. Teesdale, who is in Indianapolis making a test run of drying 4 inch vehicle ash for the Nordyke & Marmon Company. He reports that he is getting along fine, in spite of the weather. Because of rain and labor troubles the test has been delayed. It is well started now, however, and will run a month or six weeks.

T. P. Johnston, Research Engineer of the Southern Pine Association, visited the laboratory last week. The Association is investigating fifteen important subjects. Those on which Mr. Johnston expects to get information from the laboratory are the development of a standard retort for recovering turpentine from sawdust, the present system of obtaining wood pulp, and information from test data to be used in compiling strength charts. All the subjects the Association is investigating bear on work done here at the laboratory.

District 1 - Northern District

In 1916 it was estimated that approximately 1,000,000 acres in District 1 were in need of reforestation. In the same year a crew was put into the field for the purpose of making a start in the survey of all the needed lands in the white pine region which were believed to be in need of reforestation. Based on the information obtained from these surveys the estimate of plantable land was cut to 300,000 acres. After the 1917 surveys, the estimate was further reduced to 200,000 acres. Last season further reduction was made and it is probable that the original million acres estimated would have dwindled to 150,000 acres had it not been for the fact that 1,329,276 acres were burned over in 1919. About 25 per cent of this acreage constitutes second and third burns, which will undoubtedly require reforestation, and it is safe to assume that an additional 25 per cent will also be in need of reforestation.

Furthermore, the 1919 fires burned over large areas which had already been classified as having sufficient reproduction. From these figures it is now probable that there are at least 750,000 acres on the District in need of reforestation, about one-third of which lies within the white pine region.

Comparing the acreage reforested and acrege burned over annually we find that we are steadily losing ground. In the white pine belt, for example, at our present rate the plantable acreage is probably about 250,000 acres, which at our present rate of reforestation would require nearly 100 years of work

District 2 - Rocky Mountain District

A recent report from the Michigan Forest indicates that the Supervisor has anticipated a recent call issued by the Forester for the outlining of the objectives in boundary changes that may be reached through any anticipated series of exchanges. The report shows an area of over 60,000 acres on the Forest to be in need of planting if it is to be made productive. About 40,000 acres is already stocked naturally, chiefly with jack pine. Presumably the 40,000 acres of alienated land within the permanent retention boundaries of the Forest at present would show much the same percentages of unproductive and productive land.

The Michigan is notable as the National Forest on which successful planting can be done most cheaply. Practically complete success is obtained by planting the two-year-old seedlings, at a planting expense of $2.50 an acre. The trees are spaced about 8 x 8 feet and the 680 used per acre cost only $1.35. Supervision and fire-line construction adds another 60 cents. The total cost per acre of establishment is, therefore, about $4.50. If a yield at the end of ninety years of 15 M per acre, worth $20 per M, is assumed, the gross final return, exclusive of any intermediate returns, would be $300. At any reasonable rate of interest and with any reasonable administration and protection costs, this possible return indicates a good margin for profit and risk.

Far more important than any question of direct revenue to the Government as the result of these planting operations is the demonstration of the practicality of timber production on lands which, although in a State that has been settled for a hundred years, were not considered worth being taken up by citizens. Had all lands of this character been put at work producing timber half a century ago, Michigan would not today be paying heavy freight charges for most of the lumber it uses.

District 3 - Southwestern District

All future applicants for homesteads should be referred to Supervisor Douglas of the Datil, where, according to recent reports, a man from Luna, New Mexico, (who must be a June 11 applicant) took second prize in the Farm Journal's National Crop Contest for 1919 on oats with a yield of 93.68 bushels per acre. Due homage must be paid the soil superiority of the Datil and place made in the Hall of Fame for the record alongside the big fish and nature-admiring animals of the Tonto. Requisitions for forage may be sent to Supervisor Douglas, it being reported that the entire supply of grain for District 3 will be raised by cropping Luna Ranger Station with the winner of the contest on shares. Why not let other Districts try to beat the production record in this case, since this District has evidently lost out on the longevity of Forest officers and special pie contests, first finding out if the man who won first place and who lives in Monticello, Utah, is a Forest alfalfa farmer in District 4?

- From the Prescott.

"The Sign Shop in Santa Fe has finished the job with a grand total of 854 additions to the scenery of the Southwestern District. Before long it will be almost impossible for a Forest officer to get lost."

The average letter contains between 20 and 30 words or figures in the date line, designation, salutation, signature and conclusion. Recently a letter was received from a District Office man in the field in which the above totalled 25. The body of this letter consisted of but one-fifth this number or five words. However, a five word letter is the essence of brevity, we'll admit.

In 1919, twenty-two California fish hatcheries distributed over 30 million fish fry for stream planting. The State Game Warden of New Mexico is strongly advocating State hatcheries for this State, the construction and operating expenses of which it is planned will be entirely paid from the State game fund derived from the sale of licenses.

San Diego expects shortly to be able to advertise "No house sparrows here." A bounty of 10 cents a head in addition to a man detailed to sparrow killing has practically rid the city of this pest and annoyer of the beneficial song and insectivorous birds.

"Four mountain lion pelts in one trip was the record of Trapper Moore of the Biological Survey at Brush Corral on the east side of the Catalina mountains, according to word received yesterday by the Forest Service office. Moore went out Tuesday to set a trap for a wolf. He ran across the tracks of a mountain lion and with his four dogs followed it.

"He ran into a mountain lion and three yearlings. He fired seven shots and succeeded in killing all four. He had only his pistol with him having left his cabin without his rifle. All the lions were shot in the head.

"The four dogs in his pack were part of a pack of seven which Moore owned a few months ago. He recently sold three of the dogs at $150 each to another trapper in the Catalinas."

- From Tucson "Cattleman."

J. E. Thompson of New York City, who has been issued a term permit for a summer home near Greer, was a recent visitor at the Apache office. Construction work on Mr. Thompson's cabin is well under way under the direction of John Butler of Greer. The improvements will consist of a large log cabin, several smaller cabins, a garage, a road from the main Springerville-Greer road and a pipe line from Butler Spring.

District 4 - Intermountain District

On parts of the Fillmore Forest the loss of cattle reported to have been due to "Oak poisoning" has been discovered to be really due to ticks in the ears of the cattle. Ranger James Jensen took occasion to clean the ticks out of the ears of some of the cattle. On one bunch of 100 head he found at least one half pint of ticks in the ears of each of 30 head of the poorest ones. The cleaning was done last spring, and the owner reports no loss from this bunch since that time, whereas before, his loss had been about 8 or 10 head from (supposedly) oak poisoning. Others cleaned out the ticks from the ears of their stock and reported no loss. Remedies such as coal oil, sheep dip, black oil, and turpentine, were used for cleaning the ears. These remedies, however, are rather harsh. A better treatment is the pine-tar cottonseed oil remedy described in Farmer's Bulletin 980 "The Spinose Ear Tick." This remedy not only kills the ticks, but prevents reinfestation for 30 days.

Wanted:

A fairly competent, experienced male clerk. If married, his wife should be willing to accept the monotony of small town life. Climate and scenery excellent. Good fishing within a mile of town. Saturday afternoons off during summer. Boss has a Ford car for use on fishing trips. Apply at Forest office, Lemhi Forest. Salary $1340 if he stays more than 30 days. No references required.

"We feel constrained to beg the Department to rescind its order regarding Forest officers participating in politics. Why? A few days since the city caucus held to nominate city officers for the coming city election and returned a ticket of four women councilmen, or rather council women, and a woman mayor. How the deuce do you expect a fellow to keep out of politics?"

- McCain, Teton.

Supervisor Grandjean of the Boise Forest has learned from experience that it is a good idea to give names to points on Forests which will arouse curiosity and interest of the public. He says it is interesting to note the amount of applications received from would-be smokechasers for the summer stations, called "Deer Park" and "Troutdale." They totally ignore the charms of "Bald Mountain," "Danskin" and "Rocky Bar." Some of them naively admit that they want a place where the fishing is good and where one can enjoy a good vacation in peace. Supervisor Grandjean offers his experience as a suggestion for those who are developing the recreational resources of other Forests.

"Elknus Tetonus McCaini", the Elk of Convenience

"Comes now the Kingman (Arizona) Mineral Wealth, and charges that our elk are not elk at all. Well, the "Wealth" is right in a way and we may as well make a clean breast of the whole matter.

"We did try a cross with the moose in an effort to endow the elk with a stomach modeled after a wood pulp machine and a big flat horn with which to shovel snow. At first we were quite optimistic of a large measure of success. However, we met with insurmountable difficulties, chief of which was the fact that during the war the elk could not obtain sulphur in sufficient quantities to complete the preparation of the wood pulp. The true elk does not seem able to assimilate wood pulp in a raw unbleached state. The development of a flat horn seemed to give promise of success until it was discovered that the hereditary tendencies of the moose were the stronger, and that not only was a flat horn developed but the horns were shed in January and February, leaving our elk without his shovel during the greater part of the winter.

"We are now trying another experiment. We are crossing the elk (Elknus Kingmani) with the silvertip bear, helping to develop a tendency to hibernate during the most severe winter months. If this is successful we will go farther and cross with the ground squirrel, which will further develop the tendency to hibernate (the squirrels here hibernate from August 15 to April 15). We will then cross again with the bear, but this time with the black bear in order to develop a tendency in the elk to climb trees. We will then have an elk endowed by nature (?) with accomplishments which should enable him to get along fairly well. During the early winter he can shovel snow and obtain the highly concentrated portion of his ration from the ground. In order to make a balanced ration he can manufacture a reasonble amount of raw wood pulp for roughage. When he loses his snow shovel or tires of the labor of grinding wood or shovelling snow he can hibernate. If he is an unusually timid and nervous individual he can hibernate from August 15 to April 15, and the remaining four months he can spend largely in the treetops on the watch for his so-called friends, the sportsmen-hunters.

"We have one other cross in mind which will develop the perfect animal for this environment. Such an animal should be endowed with an organism adapted to the assimilation of snow.

"We have noticed that the Clark's crow, or nut-cracker, when fighting and angry will grab a mouthful of snow between licks. Our idea is to cross first with the weasel, in order to develop the proper state of mind, and then with the Clark's crow and we will have it."

- From The Teton.

Ranger W. H. McKahan on the Teton Forest recently found a wolf den around the entrance of which were the remains of mine elk that had been killed by the wolves. Altogether Ranger McKahan and Ranger Estep have found sixty game animals, mostly elk and deer, that these wolves have killed during the winter. There were three grown wolves in the pack, one black and two greys. Ranger Estep killed the black some time ago and McKahan killed one of the greys just a day before he found the den and its eight wooly inhabitants. A snapshot of the wolf pups has been received in the District Office, and the stenographers have all expressed the desire to have one for a pet. Supervisor A. C. McCain says that the one old wolf is the only one left now, and that he believes he will now quit the country, thus ridding it of a serious menace to game animals.

District 5 - California District

On April 7 the Associated Chamber of Commerce of the San Gabriel Valley passed the following resolution:

> Whereas T. W. Sloan has for the last fourteen years been in charge of this Division of the Angeles Forest, first as Ranger and later as District Ranger, during which time the people of this Valley have learned to respect him for his uniform courtesy, his fidelity to the Forest Service, and his zeal to protect the water sheds which are of such vital interest to the ranchers of this Valley; and whereas he has lately been promoted to the position of Forest Supervisor of the Santa Barbara National Forest, Therefore, we the members of the Associated Chambers of Commerce here assembled do instruct the President to convey to Mr. Sloan our sincere appreciation of his fourteen years of faithful service here, and our hearty congratulations upon his well earned promotion to Forest Supervisor.

The Montecito Fire Protective Association has offered $150.00 towards defraying the cost of a building on the Santa Barbara aviation field, and Supervisor Sloan is now proceeding with construction work. The building is for use of aviators in connection with the airplanes forest fire patrol.

The following resolutions indicate that the Service has friends who like the way it does things:

> WHEREAS, there is now pending before Congress a bill to provide for the enlargement of Sequoia National Park; and
>
> WHEREAS, there should be left some place in the United States where its citizens can go to the "tall and uncut" and into the wilds without being restricted as to where they shall sleep, eat and camp, and without having one's gun and dog sealed up or left behind; and
>
> WHEREAS, we know that under the protection of the Forest Service Dept., this country now proposed to be taken in and made a part of the National Park, has been protected in every way so that its scenic beauty is now unsurpassed by any country in the world, and its large redwood trees left uncut and protected from the lumberman: Therefore be it
>
> RESOLVED: That Sanger Post No. 23, of the Calif. Branch of the American Legion, speaking in behalf of the true lovers of outdoor life and in the interest of the whole of the United States, does hereby oppose the passage of said bill: And be it further
>
> RESOLVED, that the Secretary send copies of this resolution to other Posts of the American Legion and to Representatives in Congress.

"Due to the depleted personnel and the small number of organizations available for this work there will be but one Squadron for forest fire patrol this year. This Squadron which is the 9th Observation, will patrol the forests in California only. Until squadrons are authorized especially for this work it will be impossible to patrol the forest area in the states of Washington, Oregon, Nevada, Utah or other states with extensive forests.

The headquarters of the 9th Squadron will be Mather Field; from there operations will be carried on over the various forest reserves in California. Equipment will consist of about thirteen airplanes and all the necessary auxiliary equipment and personnel for the operation of these planes.

The Air Service has recently completed a course of instruction for civilian foresters of the Agricultural Department at March Field. This course gave training to the foresters in the work of aerial observation, pertaining particularly to forest fires and also enough instruction in the means of communication to permit these men to act as observers on the patrols instead of commissioned Air Service observers.

It is planned that the patrols be put into operation about May 1st and will probably continue to the middle of September. Some of the patrols are as great a distance as 200 miles. In these longer patrols landings are made at the emergency landing fields at one end of the route. The Department Air Service Officer, Western Department, is also contemplating the use of a flight for the patrol of the Santa Barbara forests and forest area between March and Rockwell Fields.

Airplanes used will be DeHaviland 4 B's. These being the old DeHaviland 4's remodeled with the gas tank in front of the pilot instead of between pilot and observer, thus permitting both occupants of the plane better intercommunication, due to the fact that they are closer together.

For communication, each airplane will be equipped, either with Wireless telegraph or telephone sets and the various stations equipped with the necessary receiving outfits.

Each airplane will be equipped with sufficient provisions for use of both occupants for several days in case a forced landing is made in inaccessible areas.

The airplane patrol provides much wider range of observation than the lookout stations, which were the only means the Forest Service had in the past for detection of fires. In addition to the wider range of observation, another advantage over the lookout system is the fact that when smoke is discovered the plane is able to reach the area within a comparatively short time, while with other means of observation it would sometimes take a week or ten days to arrive at the fire area, due to inaccessible ground travel.

Although the Forest Fire Patrol was, more or less, an experiment in 1919 results obtained were highly satisfactory to the Forestry Service and to the Air Service and it is believed that the work this year will be of even greater benefit due to the training and experience which was gained in 1919.

Liaison between the Air Service and the Forestry Officials has been excellent, both cooperating to the fullest extent for the successful carrying out of the patrol.

There are about twenty-four million acres of government forests that will be under observation and in addition vast areas of private lands."
(Air Service News Letter)

District 6 - Northern Pacific District

A sale for 100 million feet of Alaska pulp-wood timber, on the Tongass, has been advertised in Oregon, Washington, and Alaska papers, on specific application of a California company. The applicant has done some work in the development of water power which would be used in connection with the proposed pulp plant. The sale is being given wide publicity by Coast papers, editorially and as a news story. Several inquiries concerning the timber have been received. The species are Sitka spruce, western red cedar, Alaska cedar, and western hemlock. It is the feeling here that this sale is probably the beginning of extensive timber and water power development in Alaska, which will eventually result in at least*relief of the paper shortage and the establishment of a permanent supply of pulp.

A meeting of the Portland Section of the Society of American Foresters was held at the home of Supervisor Brundage on the evening of April 27, to discuss the Pinchot Committee report. Professor Kirkland and E. T. Allen were present, besides some 30 members. A discussion of the main points of the report was held, and the meeting decided that it would not go on record regarding the report since an opportunity would be afforded each member of the Society to vote on the report at a later date.

Every now and then we learn of something which impresses us with the vastness of the Alaskan Forests. From a report on the birch-Spruce type of the Upper Cook inlet region, recently submitted by Forest Examiner Drake, it appears that this type, which is the principal one in this locality, occupies an area of approximately 2,000 square miles. This is an area equivalent to that of most of the larger national forests of the district. The timber which is comparatively small, as might be expected from the short growing season of this northerly latitude, comprises a total stand estimated at three billion feet. The spruce is suitable for ties, piling and sawlogs. The birch, which makes up 75 per cent of the stand, would be suitable for the smaller wood working industries of the East, but here there is no such market. The report recommends the development of the type for the pulp industry inasmuch as the birch, as well as the other species in mixture, would make an excellent quality of book paper. It is stated further that this stand has scarcely been touched, that it is traversed by the Government railroad from Anchorage and is crossed by several navigable rivers.

R. H. W. in Six-Twenty-Six

A record-breaking crowd is expected at Eagle Creek Camp Grounds during the Shriners' convention in Portland, June 22, 23 and 24. As a part of the preparation for the 1920 season 50 new tables and several more stoves with brick ovens have been provided. Later some landscape work will be done on an area at the entrance of the grounds that has been refilled to provide additional parking space. A man whose principal duty is disposal of garbage left by picnickers is now on this job, and it has been arranged to have two men assigned to take care of the crowds on Sundays and other special days.

As an indication of the growing interest of the public in the Forest Protection Week campaign, a request has been received at the District Office from the Library Association of Portland for exhibit material to be used during the week. The assistant librarian states that the Association will be glad to use such displays in the main library and in three or four branch libraries as well, and suggests such material as fire equipment, fire signs, and publicity material.

Publication of the District weekly fishing and road bulletins was resumed April 21. These bulletins have in the past been widely used by the newspapers of the District. Requests have been coming for them since April 1, when

*partial

the fishing season opened. A new publication, the Oregon Motorist, issued by the Oregon State Motor Association, is especially anxious to receive the bulletins and also wishes to use in each issue a reduced copy of the Oregon Recreation and Road Map recently prepared in the District Office.

District 7 - Eastern District

Forest Guard Walter Chatfield of the White Mountain Forest recently reported at Gorham after a 400 mile trip from Utica, New York, which was made on foot and by automobile.

In checking the scale books of one of the newly appointed rangers on the White Mountain Forest it was found that 9,693 logs had been recorded without an error in the computations.

At the May term of Federal Court three men from Brevoort, N. C., who had been caught hunting with guns and dogs in Pisgah Game Preserve plead guilty and were fined $25 and costs each. This is the heaviest fine which has been imposed by this court for a first offense case where no game was killed. If fines of this kind were more frequent, the Rangers and wardens would have less trouble.

A number of other game cases were on the docket for trial, but owing to the danger from fires, the U. S. District Attorney was requested to continue these cases until November, so that the wardens might not be called from fire patrol.

About 200 days of fishing permits were sold on May 1, when the season on Pisgah opened. The catches were not large on the first day as weather conditions were not favorable for trout fishing.

Forest Examiner Yarnall on the Pisgah has written his report to the District Office on a plan of management for the Catawba working circle of the Boone National Forest. Reports for other circles will follow from time to time during the summer. In the meantime, pending the completion and approval of these management plans, applications for sales of saw stuff on both the Pisgah and Boone are being turned down.

It is already obvious, however, that the Boone can cut twice as much annually as it now is, and be within the safety limit. In other words, it should be an easy matter for the Pisgah and Boone combined to have an income in one or two years which would double or treble the expense of administration.

Farris W. Allgood has been taken in charge by Ranger Monroe Coffey on the Pisgah, as a vocational training student in forestry. Mr. Allgood was two years in the Army and came out in a bad way physically. This is the second man the Forest has attempted to coach so that he might pass the Forest Ranger's examination. The first one got homesick for the salt spray of the California Coast.

If Acquisition is interested in stumpage prices in Western North Carolina, the following figures should be read with avidity. A certain firm bought several hundred acres of hardwood timber at $75 per acre. The firm was immediately able to make a deal with a portable mill operator by selling the saw timber for $60 per M ft. in the log at the mill site. The sellers made a contract to log the timber to the mill for $10 per M. Thus the stumpage price netted by the first buyer was $50 per M. Of course this timber was of excellent quality but even so, it is a highwater price. Tract after tract is being put on the market and is being sold at stumpage prices, excluding land, at from $10 to $18 per M ft.

The Union Tanning Company is surveying a route for a narrow gauge railroad from its plant at Old Fort, N. C. in the direction of Chimney Rock, N. C. There is said to be 40 years cut of acidwood tributary to the new line. The route splits the territory examined by the Forest Service in 1914 with a view to including it in a purchase area. The examining officer recommended it as an addition to the Mt. Mitchell Area. It would now appear that we did not move fast enough.

Forest Examiner M. L. Mattoon, who has been scouting for Research in connection with the Capper Resolution is back in the Asheville Office. His report has already been sent in.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

May 17, 1920.

The Work Ahead

I have nothing that is particularly new or startling to put before the Forest Service as a plan of work. Any meeting of Rangers or Supervisors which puts down the jobs and responsibilities which seemed most important would probably outline the work ahead in very much the same way as I do. These ideas shape themselves out of the thought and interest which our whole body of men is putting into every day's work. Nevertheless, at the risk of repeating much that is obvious and fully appreciated, I want to set down what appear to me the main things that the Forest Service must put across within the next few years.

The National Forests today are a large going business, with a good many hundred thousand customers. Like any other progressive business, it must be our first concern to give our customers good service, to encourage them to come again and bring others with them. This means fairness, courtesy, and efficiency on the job. Particularly are these qualities called for in an organization whose stockholders are the people of the United States and whose purpose is primarily public service.

The National Forests touch the interests of a vast number of people. Some of these, like the use of forage and timber, are vital to the livelihood and industries of our customers. The increasing demand for grazing and stumpage and the equities of particular users, more or less definitely recognized, are making the handling of these economic resources more and more important, and, to a greater degree every year, call for efficiency on the job and for fairness in weighing and meeting requirements.

Another rapidly growing class of business serves the public in recreation and health. The needs of this class of National Forest customers must also be met with fairness as between conflicting demands, with real interest, and with the same sort of foresight and energetic development with which any progressive concern seeks to build up its trade. We are, of course, handicapped in pushing ahead along these lines as rapidly as we would like; but we can still accomplish a great deal.

The point which I want to emphasize in discussing these obvious things is that the first obligation resting upon the Forest Officer is efficient and impartial service to National Forest users. We have acquired a splendid reputation for honesty, for fairness, and for handling our work well. This is the principal reason why much of the old opposition to the National Forests has died out. It is the reason why early antagonism toward the control of grazing on the National Forests has, to a large measure, disappeared. It is the reason why western localities are now urging additions to the National Forests which were stoutly opposed a few years ago. It is the reason why the disposal of National Forest timber and the administration of timber contracts now runs more smoothly than it used to, and why western lumbermen have generally accepted such things as the reappraisal of stumpage prices. These things have come about because the Service has acquired the confidence of the Forest users and of the public behind them.

To hold and extend this confidence is the most important responsibility resting upon every one of us. That responsibility must come first in the daily work that we do and in the plans we make. We have many ideas for bettering the handling of the business, for the management of timber, the improvement of grazing. In developing and applying these plans, we must never lose sight of the fundamental requirements of fairness and impartiality. This is not to say that individual interests will not have to be restricted in carrying out the fundamental purposes which the National Forests must serve. But every such plan must be tested not only by its soundness in promoting the greatest usefulness of the National Forests in the long run, but also by its essential fairness to the people and industries affected. Things that we would like to do at once may have to be done gradually as necessary adjustments of local interests and needs can be made.

Next to giving our customers this kind of service, the most important job ahead is to eliminate the class C forest fire. Appreciating fully, as I do from my own experience as Supervisor and District Forester, the difficulties and obstacles in reaching this goal, I still will name no other. I do not expect to reach it in a few years; but I want to organize a drive for this specific objective from every point of attack, a drive not to be relaxed until the objective is gained.

Every Service activity must contribute its part to preventing and putting out forest fires. Every available source of support must be enlisted. This must be the point of immediate emphasis and development in our cooperative work with States and private owners. It calls for a large effort in developing fire protection methods and equipment and in giving fire protection personnel specialized training. It calls for the hardest thinking that the men in the Service from the top to the bottom can give, and for all of the resourcefulness and ingenuity which they can bring to bear upon the many phases of the problem.

Undoubtedly larger appropriations must be secured for protecting the National Forests. But all the money in the federal treasury will not prevent or stop forest fires without brains, experience, and skill in all parts of the job. Let us not approach the problem in terms of money. It is our job to furnish the brains and develop the skill and experience without which dollars are unavailing.

Here is a very definite task; and it is up to us to master it. The greater its size and difficulty, the greater will be the credit which we will have honestly earned if we do master it. There is no forestry problem in the world more important or more pressing than that of reducing forest fires in the United States to a limited and relatively fixed hazard. The challenge is thrown down to us and we accept it.

The next development in which I hope to see rapid progress is the plan-wise management of National Forest resources, particularly of their timber and forage. The greatest service rendered by the National Forests, in economic lines, will be the steady and permanent production of timber and forage crops. Not only should we work for an increased yield of these essential commodities as time goes on; we also want to make their use a means of developing other resources in the National Forest regions and of supporting stable industries and communities.

The use of forage in connection with the development of agricultural lands and ranch communities, the use of timber to supply local agricultural interests or furnish raw material for wood using industries which are permanent and which support permanent manufacturing towns with permanent employment for mill and forest workers, are examples. Much has already been done in these directions. Our task is to build on the foundations which have already been laid by making much more complete and exact inventories of the resources which the Forests contain and by formulating common sense plans for their use and renewal.

The forest using industries of the United States are moving westward. Within a few years the greater part of the lumber required in the United States will be cut from the National Forest regions. This western movement will rapidly increase the demands for National Forest stumpage. The value of these public holdings to the consumer of lumber and paper will steadily increase. Of equal importance, as their use develops, will be the soundness of our technical methods, our accuracy and skill in forest practice, our success in getting growth on cut-over land, and the provision we make for stable rather than temporary forest industries.

We must be ready to meet this growing business. We must know how to cut timber and dispose of slashings so as to grow all the new timber that the land can produce. We must know what timber should be cut first to prevent waste in old stands. We must know how much timber we can cut safely from a particular unit while keeping it a permanent producer. We are not going to consume time and paper in the preparation of working plans which do not work, because they are superficial, or which are not needed because intensive use is still a long time off. But we must be ready as the demand for National Forest timber strikes this point and that point to handle it--not on the spur of the moment or simply by locating an insistent applicant, not by making the greatest showing in receipts, but with real thought-out plans under which we can shape and direct the use of our Forests with intelligence and foresight.

Adjustments between the different uses of the National Forests must be made. Particularly must grazing be so adjusted that it will not seriously reduce the production of timber, which, with the protection of watersheds, is the primary function of the National Forests. This is one of the big problems which we must work out; and we must work it out not only along practical lines but with the spirit of fairness to forest users which I have emphasized. Adjustments of grazing privileges where injury to young growth is serious will often have to be gradual, in consideration not only of equities recognized by our regulations but of the real human and economic well-being of communities more or less dependent upon National Forest forage. But let no Forest officer lose sight of the fact that the object we are working towards is to grow trees wherever trees will grow; and that in the long run his success as a Forest Officer will, to a large degree, be measured by the amount of growth which he gets on the acres under his charge where suitable trees will grow.

The westward movement of the forest using industries betokens one of the outstanding economic facts of the present times which leads us into another important field of public service. The timber depletion in the United States which Gifford Pinchot so clearly foresaw many years ago, but which has pursued its irresistible course year after year, has become so clear cut and menacing that it is now widely recognized as one of the great economic problems of the country. The rapid westward movement of forest industries means nothing more nor less than the exhaustion, in varying degrees, of two-thirds of the timber resources of the United States. The effects of that exhaustion are already keenly felt. And nothing was more opportune or more characteristic of the sort of thing which the Forest Service stands for than the action of Colonel Graves in bringing this situation sharply to the attention of the country and inaugurating a plan for meeting it.

Neither has anything ever demonstrated more completely the absolute soundness of the creation of the National Forests or the absolute necessity of giving them the best technical management of which we are capable than the seriousness of timber depletion now generally recognized. It imposes an added responsibility upon the Service to see to it that the National Forests do their utmost in growing timber; but we are not going to stop there. It rests upon us to help in working this problem out as it affects the States and the devastation of privately owned forest lands. This does not mean fire protection alone, although stopping fires comes first. It means setting a good example in handling our own lands, and then using every opportunity to help in getting the measures necessary to restock burned or logged off lands generally adopted.

This is not a job that can be carried through by a few men at the head of the Forest Service. Very many of us will have opportunities to take part. And I want every man in the Service, whatever his individual duties, to appreciate the responsibility which rests upon us in carrying forward this movement for growing timber on every possible acre of timber growing land.

- W. B. Greeley
Forester.

Establishment of the Branch of Public Relations

The following Service order was signed by the Forester on May 17:

There is hereby established the Branch of Public Relations in the Forest Service, under the direction of Assistant Forester Herbert A. Smith, effective May 20, 1920.

The purpose of this Branch will be to devise and develop means of contact with the public, to the end that the services which the Forest Service is prepared to render may be better known and more generally made use of; to promote widespread diffusion of useful knowledge relating to forests, forestry, and forest products, through all available agencies; to direct, under the Forester, the publication policy of the Forest Service; and to see that all publications issued conform to the highest possible standards of technical excellence and practical usefulness. The Branch will give particular attention to enlisting the interest and cooperation of the public in the prevention and control of forest fires, and in the extension of the practice of forestry by private owners. It will also seek to promote wider use of the National Forests by directing the preparation and diffusion of information having this end in view.

The following current activities of the Forest Service will be conducted by the Branch of Public Relations in Washington:

(1) General supervision of the publication plans of the Service, and of all printing expenditures; editorial review of all manuscripts intended for official publication, by the Department or through outside agencies; review of forms; and handling of all printing requests and other communications with the Departmental Division of Publications, and of proofs.

(2) The development and execution of plans for the use in primary and secondary education of information and illustrative material concerning forestry, and the preparation of suitable material for this purpose.

(3) The collection and maintenance of photographic material for educational and illustrative purposes; the development, maintenance, and use of the lantern slide collection; requests for authorization of public addresses and lectures by members of the Service, and records of addresses and lectures made.

(4) The development, maintenance, and use of exhibit material illustrative of forestry.

(5) Motion picture activities of the Forest Service.

(6) Relations with the press, and the supplying of official information to or intended for newspaper and magazine writers and publishers.

In case of projects assigned to other Branches, such as cooperative fire protection with States and the extension of forestry to private lands, assigned to Forest Management, and the investigative projects assigned to Research or Grazing, the Branch to which the project is assigned will be responsible for formulating the entire plan of action necessary to advance or complete the project, or to secure the best utilization of its results by the public; but Public Relations will, within its general field, cooperate with and assist the other Branches in the development and execution of such plans. Public Relations will also develop cooperative relations with the States Relations Service, with other Federal and State agencies, and with officers or organizations of public instruction, for arousing wider interest in the practice of forestry.

The Branch will direct all work falling within its field of activities which is now conducted or which may be conducted in the Districts. Such work in the several Districts will be under the direction of one member of the District office staff, with the expectation that eventually this work will be organized as an Office of Public Relations. No attempt will be made, however, to complete this organization except as, in each District, the natural development and importance of such work make this step desirable.

- W. B. Greeley,
Forester.

Yellow Pine Hits the Ceiling in Italy

It is cheaper to use native walnut in Italy than it is to use longleaf yellow pine imported from the United States; and for certain purposes, for example, stairways, a saving can be effected by substituting native white marble for the imported timber, according to a statement in a recent Consular Report. Ordinary yellow pine or "pitch pine," as it is known to the trade, is highly regarded in Italy and would have a large sale if the cost had not advanced to a prohibitive figure. The combination of increased initial cost, high ocean freights, and adverse exchange has, however, greatly interfered with the lumber trade between the United States and Italy, and most of the lumber that is now being purchased is coming from Austria and Jugoslavia. Prices on timber from these countries as shown by recent purchases are about one-fourth the cost of yellow pine and one-fifth the cost of the No. 2 red gum.

It is reported that a considerable stock of Austrian timber is now available for export. The chief difficulty is that of transportation. Large amounts of lumber are needed in Italy both for reconstruction work in the devastated areas and for building purposes in the largest cities, such as Milan, Genoa, and Rome, where the housing problem is most serious.

Where should the Improvement Appropriation go?

The Agricultural Appropriation bill was recently shorn of the $50,000 item for range development leaving the time worn balance of $400,000 for general work. Incidently, this item has remained unchanged for seven years. Congress having decided that range development might await more prosperous times, in so far as increasing the appropriation to continue that class of work is concerned, and in view of increased and ever-growing costs of supplies and wages it is evident that retrenchment must be made in some line of improvement activity. Where shall the retrenchment be made? The decision is that lines of work more recently assumed should bear the burden of the cut; therefore only one range project is approved. Recreation projects will be financed only under very special circumstances. In this connection a complete expression of governing policy will be included in the allotment letters. If the public desires the National Forests improved for recreational purposes, they must, through Congress provide the funds. It is hoped that reasons for making appropriation for this class of work might be specifically presented to the next Congress.

With call for money for range and recreation projects set aside the Office of Operation cast about for a basis upon which a plan for the distribution of the $400,000 could be laid. What facts or policies have governed in the past? How are relative needs of the Districts to be unearthed and identified? How are Districts to be convinced of the correctness of conclusions drawn? These are only a few of the problems which are presented.

The most comprehensive data available bearing upon past allotment, performances and present status of the improvement situation of the various Districts was tabulated. Graphs giving pictures of the tabulations were drawn. With this information as a check to general knowledge and judgment, the process of distribution was taken up. The following tabulations show in part the guiding data and the result.

General data

	Districts						
	1	2	3	4	5	6	7
Status of lookout house projects	Practically not commenced	No need	How many necessary	Yet to be built	Practically completed	82 needed	No need
Completion telephone system	Far from complete	Practically complete	85% complete	Many miles yet to construct	Practically completed	70% complete	Stubs only to construct
Relative cost of telephone maintenance	Very high	Average	Average	High because of old pole lines	Average	High	Average
Status of other protection improvements, firemen cabins, pastures, other buildings, etc.	Practically none	Were supplied	Well supplied	Need large on fire forests	Ahead of other districts	Large need	Small need
Status housing and comfort improvements for year-long field force	Average	Average	Average	Average	Above average	Average	Average
Relative size of protection job	Largest	Fifth	Fifth	Fourth	Third	Second	Fifth
Cost of doing improvement work due to accessibility, etc.	High	Average	Average	In north high, other average	Average	High	Average
Prevailing class construction project recommended 1921	Telephone lines	Sta. improvement	Telephone lines	Sta. improvement	Sta. improvement	Telephone lines	Split
Dominant reasons for large allotment.	Fire	None	None	Addition of one million acres Thunder Mt.	Alaska Area class A, hazard large	None	None

Dist.	Value telephone lines	Look-outs	Dwellings	Barns	Other improvements less range trails and roads	Total value	Total value prorated per township
1	233,272	9,729	147,024	47,271	145,880	539,976	430
2	156,953	8,735	129,242	48,051	187,297	530,297	436
3	152,020	14,824	97,628	41,597	113,578	419,647	475
4	268,641	3,490	143,432	41,902	144,358	602,023	460
5	218,411	29,274	113,488	41,490	175,369	578,023	550
6	311,218	23,796	121,940	32,840	138,965	628,759	500
7	49,417	9,453	61,788	10,850	41,919	173,427	1,285

	Approximate total improvement allotment		Allotment					
			1919		1920		1921 Proposed	
Dist.	To date	Per tp.	Total	Per tp.	Total	Per tp.	Total	Per tp.
1	956,000	830	92,042	80	85,163	73	87,000	75
2	576,000	580	49,279	50	49,880	50	50,000	51
3	619,000	675	49,181	54	60,468	66	54,000	60
4	664,000	505	51,055	40	51,610	40	59,000	47
5	734,000	700	65,077	49	52,015	49	52,000	50
6	900,000	725	72,082	61	71,720	60	86,000	73
7	94,191	690	12,507	91	14,034	102	12,000	88

	District						
	1	2	3	4	5	6	7
Prorata share on straight area basis per township	60	60	60	60	60	60	60
Proposed 1921 allotment per township	73	50	61	46	52	72	88
Proposed 1921 allotment more or less than straight area share	+13	-10	+1	-14	-8	+12	+28

Who can say the distribution is wrong? Is a more substantial basis for the making of allotments from the Improvement appropriation not needed? The laying of the corner stone in a sounder foundation will soon be laid. Every District will be invited to participate in the job. It will be some job.

- E. W. Kelley.

Jardine's work in the Service

When James T. Jardine entered the Service as a special agent in June, 1907, he stated that he was born on a cattle ranch in Oneida County, Idaho, and that he had put in most of his time handling cattle on the ranges in Idaho and Montana, dabbling a little in the meantime with civil engineering in the Reclamation Service and also with a bunch of engineers who were running lines for a railroad in Sumpter Valley, Oregon. When, however, he entered the Forest Service he immediately undertook to discover some method of handling sheep under fence. Just why the ex-cowpuncher should develop such anxiety to fence up a bunch of woollies can only be explained by the natural antipathy of his class to seeing Mary's little lambs running at large. Jardine must have felt that fenced up they were far less liable to harm the scenery than under the old-fashioned method of herding.

For two years he sat up nights with the experimental bunch of sheep on the Wallowa Forest, until he knew all about every individual one of the 2200 or 2300 animals under his charge. He knew intimately their comings and goings, their peculiarities of color, age, sex and breed. To him they told their hopes and aspirations, their sorrows and anxieties. He was at once the father confessor and big brother to them all. He proved himself so able that after careful consideration of his qualities and ability he was appointed a probationary forest ranger at a salary of $1400 per year. (Money was no object in those halcyon days.) Previous to that time as special agent he had been getting $1900 a year, so that it is difficult to say whether this was a promotion or a demotion.

At any rate James Tertius stuck to the job, worked eighteen or twenty hours a day, proved that his ideas on sheep herding were sound, and eventually became Inspector of Grazing attached to the Washington Office. During his term of servitude with the lambs on the Wallowa Forest when he wasn't busy nursing some wobbly legged lamblet back to life, or "grafting" onto some venerable Mother Ewe with a family of her own the disowned offspring of some erring Sister Ewe, he was working out a lot of new ideas that were incubating in his active brain. Thus he invented and patented the grazing studies branch of the Forest Service, and immediately upon his detail to the Washington Office was given a free hand to put his ideas into practice and was placed in charge of that line of work, which he has so successfully carried out ever since.

Naturally his activities attracted the attention of men interested in this line of investigation, so much so that he received many outside offers at salaries far in advance of anything the Government could pay. For some years he turned a deaf ear to these tempters, but eventually the Oregon Agricultural College people followed him to a point where, hemmed in and with his back against the wall, he was forced to make terms with them. In an effort to avoid separation from the Service he named a salary and other requirements which he hoped would scare them off, for he really did not want to leave us, but to his sorrow his figure was accepted and, being a man of his word, there was nothing left but to make the best of it and hand in his resignation.

Mr. Jardine's leaving will be a distinct loss to the Branch of Grazing. His enthusiasm, his personal following among the men, and his ability to inspire every one with whom he comes in contact, are the outstanding features of his personality. As for his work, that speaks for itself. As Mr. Potter built up the administrative end of grazing so Jardine evolved and built up the purely technical side of it.

In his new position he will have under him a number of state experimental stations closely connected with the Oregon Agricultural College. There is no question but that he will set a pace which will require some tremendous hustling on the part of his successors in the Branch of Grazing to keep from being run over by his wheels of progress, to say nothing of getting ahead of him, for he is sure to be "tramping on our heels" all the time. In this work, however, we expect to cooperate closely with Mr. Jardine and by no means lose the benefit of his sound advice and counsel simply because he is working for the State of Oregon instead of the Federal Government.

Here's looking at you, Jardine, may you have good luck and lots of it!

W. C. B.

Mr. Potter's Movements

Mr. Potter, who left for the West about April 22 in his auto was reported mud-bound at Columbia, Missouri, a few days ago. Inasmuch as the weather map has showed continuous and heavy rains all over that portion of the United States in all probability Mr. Potter has had to wait for the mud to dry up so he could proceed on his journey to Los Angeles, which he intended to make through southeastern Kansas, into Oklahoma, across the Panhandle of Texas, and through New Mexico and Arizona.

Increase in Receipts

At the termination of April 30 the receipts for this fiscal year are $300,000 ahead of the same period last year. The increase is entirely from timber sales, there being an apparent decrease in receipts from grazing of $148,000.

In all probability this falling of in grazing receipts is due to the cutting out of practically all the temporary permits which have been granted during the last three years as a war emergency measure. It is expected that there will be a decrease in the number of permitted stock this year due to losses in the West, heavy sales of stock to prevent losses, and the great reduction generally in the number of stock, which seems to be taking place in the range States. Grazing believes that after all the permits are issued and the supervisors learn exactly how much surplus range they are going to have, they will have little trouble in filling it up with temporary stock and that eventually the receipts will be brought back to approximately those of last year.

Washington Notes

Major R. Y. Stuart, formerly in charge of the Western Division of Forest Management, left last week to take up his new duties as Deputy Commissioner of Forestry in Pennsylvania.

Fred Morrell, Assistant District Forester in charge of Operation in District 2, is in Washington for a stay of several weeks.

O. M. Butler, Assistant Director of the Forest Products Laboratory at Madison, Wisconsin, has come to Washington to assist in putting the report on the Capper Resolution in shape. Common report has it that the men engaged on the Capper Resolution work will be ready for candidacy into some institute for the feeble minded by the time the report is finished.

Frank E. Bonner left Sunday night for a prolonged inspection trip connected with road work. He does not expect to return to Washington until snow flies.

Geo. B. Sudworth will accompany Secretary Meredith to Austin, Texas, this week where hearings will be had before the Texas State Legislature regarding the quarantine on the pink boll worm.

Paul D. Kelleter left last week for Deadwood, South Dakota, to appear as a witness in the case of the C. & N. W. Ry. Co. fire trespass. Mr. Kelleter was Supervisor of the Black Hills Forest in October, 1917, when one of the trains of the railway company set fire which burned over a considerable area and caused a damage of approximately $3,000. The Government is now in suit to recover damages against the railway company.

M. W. Thompson from the Denver office is in the Washington office in connection with the report on the Capper Resolution. Previous to his detail here Mr. Thompson spent some time in Lincoln, Kansas City, Omaha, and the Madiso Laboratory, getting data for the report.

J. G. Peters has been appointed Acting Chief of the Eastern Division of the Branch of Forest Management.

Forest Products Laboratory Notes

Tests made at the Laboratory indicate that a satisfactory fruit container can be made out of white fir and noble fir, which will meet practically all of the needs of the trade. The tests showed that white and noble fir were not as strong as the western yellow pine or sugar pine, but developed more strength than the Douglas fir.

These tests indicate the manner in which the Laboratory can assist in the administration of the National Forests by showing the possible uses for quick growing, low priced species which ordinarily are in little demand.

J. Paton of Gillard Gordon, Ltd. of Sydney, Australia, called at the Laboratory to get information on hardwood distillation methods. He says in Australia they have 300 species of eucalyptus trees. At present his company is using only the leaves of the trees and he is getting information here that will enable them to utilize the wood as well as the leaves.

The Consolidated Naval Stores Company is experimenting on the use of veneer cores for paving blocks.

A laminated or built-up railway tie was exhibited at the National Railway Appliance Exhibit in Chicago recently, which, because of its increased width at the ends results, it is said, in a saving of about 15 per cent of the number of ties necessary and about 10 per cent of the quantity of lumber required for each mile of track. The cost of putting down and replacing of the ties is therefore reduced as well as the amount of timber required.

The tie is constructed of one-inch, two-inch, or three-inch surfaced lumber two inches wide and two and one-half feet long. The lumber is all treated before it is put together, then heavy pressure is applied, or inch dowels inserted, so that several pieces may be securely fastened together.

For the past six months we have received at the mail desk letters from the far parts of the world, - from the Orient, the islands of the Pacific, Atlantic, South America, and many of the European countries. These letters have contained inquiries in regard to the work of the Laboratory, - many of the relating to gluing and kiln drying problems, others regarding the identification of woods from different parts of the world or the uses of various fibers and pulps in the manufacture of paper, artificial silks or furniture. The Canadians, the Japanese, the Australians, various provinces of India and Africa, - especially the British Colonies, - France, and even a good many German firms, have been among our most frequent correspondents. In almost every case where we have answered their inquiries, we have received answers thanking us and commending our splendid service, and promising us their hearty support.

District 1 - Northern District

Superintendent Lindsley of the Yellowstone Park, who visited the Office of Grazing in April, stated that the elk of the northern herd were apparently going to come through the winter in a very good shape in spite of the dubious prospects last fall. About 1,400 tons of hay were secured by the Park Service, and most of it has been fed to them. Feeding was discontinued about April 15 as most of the elk had left the feeding grounds and drifted back into the hills to shift for themselves.

Superintendent Lindsley reported that losses were comparatively light, possibly a thousand head in all, and were confined mostly to calves and young animals that died on or near the feeding ground where they came after being greatly weakened by hunger and exposure.

The Gallatin and Absaroka Supervisors plan to submit, in the near future, a report showing the number of elk killed during the past season, the number lost by starvation, and a general summary of conditions during the winter and spring just passed.

District 2 - Rocky Mountain District

Volney T. Hoggatt, Editor of the Great Divide, a paper devoted largely to the interests of settlers in Colorado and adjacent states has challenged the Forester to accompany him on a joint examination of lands in the Ashley Forest in District 4 and the Hayden Forest in District 2. Mr. Hoggatt claims that very extensive areas including several townships are entirely treeless and not valuable for forest purposes and should be made available for settlement entry.

Since the Forester was not able to accompany the invitation to accompany Mr. Hoggatt, Mr. Thos. G. Shearman, the attorney in charge of Forest appeals cases, will make the trip as the Secretary's personal representative.

Messrs. Hoggatt and Shearman will be accompanied by the Supervisor and at least one member of the District Office while on the Hayden Forest, and the examination is expected to start about May 15.

The offices of the Pike National Forest are being moved to the New Federal Building on the same floor as the District Office. Hereafter, the Pike personnel can be expected to arrive on time.

Percy J. Paxton, who has been in the Service continuously since 1903 with the exception of two years and four months spent in the Army, has resigned to accept a position as forester on a private estate in Virginia, with headquarters at Harrisonburg, Va.

W. C. Campbell, Surveyor in charge of Entry Surveys, who has been in the Service since 1913 has resigned to go into business for himself in Las Vegas, New Mexico.

Forest Supervisors of the Battlement, Gunnison, and Uncompahgre Forests held a meeting on May 11 with the various County Agents of that section of the State to discuss matters pertaining to the bearing of the reclamation projects on the National Forest grazing privileges. Demands for range are more than the Forests can take care of and there should be some common agreement between the County Agents and the Forest officers as to just how far production of livestock on the projects should be encouraged by the County Agents. The meeting was attended by Mr. Douglas of the District Office.

J. F. Lawson, formerly Assistant to the Solicitor in District 4, has assumed his duties as successor to Geo. E. Trowbridge who has resigned to become associated with the Southern California Edison Company with headquarters at Los Angeles, Calif.

The bridge over the Poudre River on the Bennett Creek Road project has been completed. It is a three-span queen post truss affair, with a total length of 120 feet. It is a very much more substantial structure, than the other bridges built by the County across the Poudre River and it is thought that it will take care of future needs not only of automobile travel, but also of heavy trucking. The bridge was completed just before the spring floods started. The crew is now going ahead with the construction of the road proper.

Supervisor Marshall expects to plant about 600 acres on the Minnesota Forest this spring. No trouble has been experienced in securing men this spring, due possibly to the hesitancy of lumber companies in starting summer logging operations in view of the timber workers' strike which was to be called on May 3.

The comfort of the 35 men employed on the job and the efficiency of their work has been greatly increased because of the convenient camp facilities available. The Northern Pine Crating Company, which logged some burned-over jack pine timber on the Forest last winter, offered the use of their bunk and mess houses, barns, etc., together with stoves, blankets, and other equipment. The Lake States lumber camps are noted for the excellent board furnished the men, and this planting camp is keeping up to the standard, as the following average menu for a dinner indicates.

Roast Beef and brown gravy
Boiled Potatoes
Baked Beans
Stewed Corn
Assorted Pickles and Beets
Apple Sauce
Raisin Pie
Three kinds of Cake
Two kinds of Cookies
Tarts with Jelly
Bread and Butter - Tea

As might be expected after reading the above, the camp has been very popular with the Minnesota Forest officers, and District officials have been in no hurry to complete inspections and depart. (Need any more help on the job? Ed.)

The Nebraska planting operations have been seriously handicapped this spring by the difficulty in securing and keeping men, and also by frequent rain and snowstorms during which period many of the men left. Five years ago, there were probably twenty-five families to every township in the sandhill region of Nebraska, while at present the number of families will run five to ten. The land is being consolidated into large holdings by cattle companies, however, and the homesteader is disappearing. Consequently it is no longer possible to hire large numbers of men locally, and they must be shipped in from Lincoln or Grand Island. Here the Service is competing with large local demands for labor from farmers and construction projects. Up to May 1, about half of the planting and transplanting had been completed.

During the first four months of this calendar year, 180 books and periodicals were loaned by the District Library to field men.

"Summer Homes in the National Forests" is the title of an article by Theodore M. Fisher, a writer of note living at Colorado Springs, published in the May issue of the Ladies Home Journal. Mr. Fisher's effective cooperation with the Office of Information made it possible to feature this phase of recreational activities in a magazine of National circulation. As a result, the Denver office received 16 letters in two days from Gulf and Lake States, the Middle West and far New England, inquiring about summer homes in the Rockies. Does it pay to advertise?

Why not an "Office of Public Service?"

One of the newest branches of the District organization of the Forest Service, which is rapidly coming to the fore, is the so-called "Office of Educational Cooperation." At the present time this unwieldy term covers a considerable number of activities, including publicity, information, educational work, photographs and motion pictures, exhibits, and even game protection - all connected, to a greater or less extent with the public interests. To business men, and practically all others with whom we have dealings, the title "Educational Cooperation" is misleading, since in its general sense it signifies work pertaining to instruction and training as well as the development and cultivation of knowledge. While the Service is doubtless interested in the big problem of educating the people to understand what forestry and the National Forests stand for, I believe that we should get away from anything that pertains to the "teacher" idea, rather than that we are on the job to "serve." Why not, then, an "Office of Public Service?" Such a designation is not only pertinent to the work performed, but is self explanatory. "Service" is what people are looking for these days, and they are going to go to those agencies which supply it, regardless of whether they are private or Federal organizations. It is, therefore, up to us, if we are to hold our place in the line of progress, to lend every effort to meet this demand.

– Hutchinson.

(The answer to Mr. Hutchinson's query is to be found in the announcement of the "Branch of Public Relations" on page 3. – Ed.)

District 3 – Southwestern District

Ranger Shartzer of the Manzano believes in economy of supplies. Instead of requisitioning a box of assorted rubber bands, he has a discarded inner tube handy and snips off bands of any desired width. He says he obtained the idea from a country store where he saw this class of band for sale at 1¢ each. If the rubber band industry hears of this there may be a law passed forbidding Rangers to own Fords, so in repeating be careful not to stretch it.

The mountain lion is notoriously a cowardly animal in his relation to humans. However, Forest Examiner Gill while on the upper Gallinas on the Santa Fe recently had one of the big fellows step out less than a hundred yards distant and eye him wistfully for a full minute. It was early in the day and Gill swears that there's no questioning the look – it was freely interpreted "To breakfast or not to breakfast?" What the outcome of the affair would have been had a tender, young, succulent Forest Assistant been in Gill's place is not certain but anyway, after fully looking the chance offering over, the lion moved on further in search of food.

The Supreme Court of the United States has finally and unqualifiedly sustained the injunction secured by the Forest Service against Ex-Congressman Cameron forbidding further occupancy of the Cape Horn mining claim at the Grand Canyon without governmental permit. This was the main case around which all the litigation at the Canyon has centered. Injunction was obtained in 1915, suspended by the Circuit Court of Appeals, San Francisco, in 1918 and final decision in April 1920.

A study of the smelter smoke problem in the Verde Valley is being undertaken by several agencies. The United Verde and the United Verde Extension copper companies each have staff chemists in the field and in addition the latter company is employing a plant pathologist. All three are carrying complete laboratory equipment on specially fitted-out Ford cars. An additional chemist is being sent in by the federal government and also a plant pathologist by the Verde Valley Farmers' and Stockmen's Protective Association. Doubtless this ambitious attempt to solve the troublesome smelter smoke question will result in final conclusions that will be of use not only in the Verde Valley but in other mining regions.

"A rag dipped in 'Little' sheep dip and placed in the telephone box will keep out flies, moths, etc. If you are troubled with these you might try it out. It is said to be better than moth balls."

– Ranger Scholefield of the Coronado.

Once upon a time there was a ranger who loved fruit trees. He liked the sweet scent of the apple blossoms no less than the fruit thereof – maybe even the juice of the fruit; and he enjoyed seeing the fresh green of the foliage wet with the dew on a spring morning. He decided to have an apple tree on his station grounds – many apple trees; and peach, and pear and plum and others. He measured his domain and made a beautiful planting plan; he made a thing of beauty that when carried out would have been a joy for many generations of Rangers to come. On his Oliver he pecked out a list and a letter – they both accompanied the plan to the Supervisor of this domain of mountains and timber. And then he started digging tree holes.

Did he get the trees? A week later the R. F. D. dropped a franked envelope and other things in the Four Corners box a mile from the station. And a short, terse note it contained. "Uncle Sam says no money to be spent for fruit or shade trees from our appropriations." And that's all.

Did the ranger throw up the plan? Did he cuss out his boss as a bewhiskered, doddering old chump with near-sighted befogged spectacles? Nope. He counted out his holes, filled one or two, reduced his plan a bit and cut the order to fit the size of a few extra dollars that by strange chance happened to be in the old P. A. box at the end of last month. And a month later the trees paid for from his own pocket were all in place.

Conclusion, moral and golden text: The ranger actually lived long enough to enjoy some of the fruits of his planting; he was neither court-martialed nor shot at sunrise for his act; and many generations of Rangers that followed on his station called him blessed. Selah!

How fast can a thoroughly scared buck antelope run? Deputy Supervisor Turk on the Datil recently was placed in a position to answer this question when in crossing the San Augustine Plains on the Forest Service motorcycle he raced with an antelope along several miles of straight road. The animal ran parallel to the road and evidently sensed the spirit of the affair, registering 34 miles an hour on the bike's speedometer before crying quits.

The District Office has a window exhibit in one of the Albuquerque automobile dealer's places fronting on Central Avenue. The exhibit consists of a display of typical road and trail signs selected from this year's output of the Sign Shop. Placards are also included explaining the exhibit and telling the numbers of these signs that are put out yearly.

Resolution No. 4 adopted by the New Mexico & Horse Growers' Association:

"Whereas, many thousand head of livestock especially sheep and goats are grazed in the United States by aliens who claimed exemption from draft during the war, and

"Whereas, many of these aliens own little or no taxable property and by drifting from place to place avoid the necessity of investing in ranch property, therefore be it

"Resolved, that the New Mexico Cattle & Horse Growers' Association favors the adoption of regulations by those in control of the National Forests whereby American citizens shall be given preference in the issuance of grazing permits, and that hereafter only temporary permits be issued aliens and then only when a surplus of range is available,

"Resolved, that this Association favors a State law or ruling by the State Land Office prohibiting the purchase or leasing of state lands by aliens, and be it further

"Resolved, that this Association favors a federal law or ruling prohibiting the grazing of alien owned livestock on the public domain."

District 4 - Intermountain District

Vernon Metcalf, formerly Chief of Operation in this District, who has been on leave of absence for the past year, has submitted his resignation. In a letter to the District Forester, Mr. Metcalf, after stating that he had found it necessary to leave the Service for financial reasons, says:

"Service work, in my opinion, if one has the interest of the Service at heart, is one of the most interesting and satisfying of occupations. Absolute freedom from a need of doing other than that which is right, all the room in the world for initiative, full, if sometimes delayed, reward in advancement for individual effort, true democracy between superior and subordinate officers, and the extreme satisfaction of knowing that one's efforts are at least in line with the principle of making the world a better place in which to live, together with the opportunity to handle and become intimate with a great variety of interesting problems, all of which have been experienced by myself in the Service, can not help but cause an extreme feeling of regret at this official severance of relations. Personally, I feel that if I had gained nothing else, the opportunity to know, associate and work with the class of officers found in the Forest Service would have made my years of service entirely worth while."

Recently some of the local sportsmen who are members of the Fish and Game Club on the Lemhi, had a fish fry at a restaurant in Mackay, Idaho. The fish were caught out of season and the Game Warden was on the trail of the violators. They eluded him and had the "feed" unmolested. The warden solicited the help of the Forest Supervisor in making a search and they raided the place, too late to catch the men who ate the fish. They did, however, find two large trout in the ice-box, whereupon they took the proprietor of the place into custody. He plead guilty of having the fish in his possession and was fined $25 and costs. It is understood that the others helped pay the fine. The Mackay Miner, in commenting upon the incident, stated that the cost of a fish feed in Mackay during the closed season compared favorably with the restaurant rates on trout in some of the finest eating houses in New York.

The three big wolves that have been menacing stock in San Juan County on the La Sal Forest for a long time were recently caught by trappers, together with eleven wolf pups. One of the big wolves has an interesting history and has become known by the name of "Old Big Foot." During the past ten years he has done so much damage to stockmen in the southern part of San Juan County that a reward of $1,000 was offered by the South Elks Stockgrowers Association for his capture, which sum was recently paid to Roy Musselman, in addition to the usual bounty paid by the State and County. This wolf is supposed to be about 12 years old, his fur is light, and in life, when seen at a distance, appeared almost white. According to stockmen he has ranged in a circle of several hundred miles and was always followed by a pack of coyotes, which fed upon the carcasses that the wolf left.

District 6 - Northern Pacific District

Forest Examiner W. B. Osborne, Jr., recently conducted some experiments to determine the practicability of flashing messages at night for long distances by means of controlled lights. Through the courtesy of Colonel Stevens, head of the Army recruiting work in this District, a high-powered Army search-light mounted on a truck was made available for these tests. The light was stationed on Portland Heights and its rays were plainly seen at Salem, fifty miles away.

The Oregon Agricultural College Forestry Club has dedicated three scarlet oaks to the memory of three former students of the school of forestry who died in military service. One of them, Owen W. Johnson, was with the 20th Engineers and died in southern France.

Captain Leonard Lundgren, formerly District Engineer in this District, who resigned in 1917 to enter military service, has written to Mr. Cecil from Camp Gordon, Atlanta, Georgia, where he is Senior Instructor, Highways and Bridges, in Vocational Training work. He returned from France in July, 1919, in impaired health, and spent several months in Walter Reed Hospital, Washington. His teaching is done through actual reconstruction and maintenance of the roads of the camp, and the out-door employment has apparently fully restored his health.

Supervisor C. C. Hall, of the Santiam, has presented the District Office with a framed picture of Clear Lake, on the Santiam, which, as an example of forestry craft, ranks with the yew wood articles made by Forest Examiner C. J. Kraebel and Supervisor G. F. Allen. Mr. Hall took the picture, enlarged it, cut the glass from a broken windowpane, and made the frame from beautifully grained Douglas fir from the Santiam, all at a total cash outlay of 63 cents. The picture is among the most attractive in the District Office collection.

The Trails Club of the Northwest is an organization interested in developing and making accessible areas of scenic beauty. Voluntary labor of members of the Club is clearing a path up Larch Mountain, which may possibly be included in the Oregon Forest if pending legislation becomes effective. The club proposes also to build a trail to a fine, ice-cold spring on the summit of Larch. The new trail, which will begin at Angel's Rest near Columbia Highway, will be completed by June.

The recurrence of severe windstorms on portions of the Crater has emphasized the possible need of a change in marking methods in the yellow-pine type there. In 1915, 1916, 1918, and in April, 1920, there occurred on the Crater, windstorms or local tornadoes, so severe as to cause heavy windfalls of reserve trees on cut-over and sale areas. Forest Examiner Weidman is spending some time on the Crater investigating the entire situation.

Henrik Carbonnier, of the Swedish forest service, is spending a week in this District investigating American timber sale methods, reforestation, and other forest activities. He has just come from Canada, where he spent some time in similar observations. He has visited the Wind River Nursery and a nearby timber sale, and a sale on the Crater Forest. Mr. Carbonnier says that in Sweden lumbermen are required to reforest their logged-off land unless the cutting is done so that the forest will reproduce naturally.

An 11-year-old boy, by his testimony before the United States Commissioner in Portland recently, was the chief witness in a trial which resulted in the conviction of a man for stealing saddles, a tent fly, and food from a ranger's cabin on the Siuslaw.

April 28 Forest Supervisor R. L. Fromme, of the Olympic, showed over 160 screen pictures of wild life, scenery, and activities of the Olympic before a united meeting of the Olympia Chamber of Commerce and the Thurston County Sportsmen Association. Later the pictures were exhibited at the Olympia High School.

Forest Examiner Wellman Holbrook left for Alaska on May 7, where he will make an extensive land classification on the Tongass, in the vicinity of Ketchikan. His work will be on the Prince of Wales and Kuiu Islands principally, and will cover 3-1/2 million acres. Hemlock and spruce predominate on the area, Sitka spruce being the most valuable species. The stand contains also red and yellow cedar, of low value. Mr. Holbrook and his assistant will make their headquarters on their boat; working inland from their floating station. Mr. Holbrook expects to be back about October first.

The South Fork of Snoqualmie River, which has been closed to fishing during the past two seasons, is open this year, according to the King County Game Commission. This will mean that the Denny Creek Camp Grounds will have a greatly increased number of visitors the coming season, and more money is needed for improvements so that campers can be taken care of without too much crowding. Even with much smaller crowds that are anticipated this summer, the grounds were at times last year crowded to the limit of their capacity.

If funds are available, the buildings of the North Bend Lumber Company camp at Rockdale will be purchased by the Forest Service. The buildings contain several thousand feet of rough lumber which is badly needed for construction of storehouse and living quarters for men at Denny Creek Camp Grounds. The purchase of this lumber will mean a considerable saving to the Service as it can be bought for less than one-third of the present market price. Charges for freight and hauling will be only a fraction of what it would cost to have this material shipped in from the outside. It is proposed to use a Forest Service team to haul the lumber from Rockdale to the Camp Grounds, a distance of about one mile.

Wm. L. Nelson, who has been with the Service each summer for a number of years, recently returned to Seattle after a several weeks' stay in the East. Mr. Nelson will be employed at Lester again this summer.

From present indications, good men will be as scarce this summer as they were last, and the Forest Service will have to pay its temporary men at least the same rate as last year. Loggers in most camps were recently granted a voluntary raise in pay of fifty cents a day.

Wages in the various camps and mills average from 50¢ to $1.00 per day higher this season, as compared with last year. The following is the wage scale of camps and mills in the vicinity of Darrington:

	Low	High
Graders	$4.75	$5.00
Buckers	5.50	6.00
Chokermen	5.50	6.00
Fallers 2d	6.00	6.50
" 1st	6.25	6.75
Rigging slinger	6.50	7.50
Hook tender	7.50	8.00
Fireman side	$255 per mo.	

Men loading bolts & making roads, bolt camps,
$6.00 and board to $6.50 and board.
Bolt camp foreman, $175 per mo. and board.

The above figures may vary slightly in some cases from actual wages paid, but for the most part are quite accurate.

The wage schedule for temporary Forest Service employees compares ve unfavorably with other labor. In 1914 our Guards received $75.00 per month. At that time buckers received $3.00 per day, or $75.00 per 25-day month. The wages received by Guards at that time compared favorably with buckers' wages. At present, if Guards received equivalent to buckers' wages they would average from $137.50 to $150.00 per month. Working conditions for the woods worker have been materially improved. He works 8 hours instead of 10; is furnished a spring bed, baths, blankets and in some camps sheets and a man to make his bed. A charge of $1.00 per week is made where sheets and a man to make beds are furnished. Some camps furnish blankets only but make no charge for their use. Any man who wishes can work steady nearly the entire year, while in the past employment was very uncertain. These conditions are going to make it very difficult for the Forest Service to secure efficient men for the protective force with the money available. It would seem that men will have to be induced to work for the Service for other than financial reasons.

District 7 - Eastern District

Forest Ranger L. M. Carland of the Pisgah National Forest was killed on the morning of May 14, when a truck, which he was driving, was struck by a train of the Southern Railroad near the station of Horning, N. C.

Ranger Carland was employed on the Vanderbilt Estate before its acquisition by the Government. In 1916 he was appointed Assistant Forest Ranger and in 1918 was promoted to Forest Ranger. He was a valued member of the force of the Pisgah Forest and at the time of his death was on his way to start some road work of which he was to have been in charge. He leaves a wife and two children.

Acquisition

Mr. Dieffenbach, in charge of Surveys in Acquisition, has recently returned from an inspection trip in North Carolina and Georgia. The greatest part of the time was given to an extensive examination of the surveys of the Olmsted and adjoining lands, made in company with the assistant to the Solicitor, Mr. McConville.

Forest Examiner H. M. Sears, now stationed at Buena Vista, Va., has been called to Washington, to assist in preparing cases for the next meeting of the National Forest Reservation Commission, which it is expected will be held early in June.

The purchase of lands on the Ozark and Arkansas Purchase Areas may be seriously hampered through the establishment of Road Improvement Districts under the Alexander law. As the districts are established under this law, tax levies covering a number of years are provided for and the unpaid assessments act as a lien against the property. Since no way is provided for the payment of these assessments in advance of the years in which they fall due and it is not possible for the Government to acquire the land subject to such an unpaid assessment, it appears that unless some way is found of obviating the difficulty the Government is estopped from making purchases in districts where such assessments have been levied.

Examiner of Surveys E. R. Conrad will shortly proceed to the Boone Area in North Carolina from the Shenandoah Area in Virginia to make surveys of lands that have been approved for purchase on the former. This is Mr. Conrad's first experience in North Carolina where he will find the land grant situation probably as difficult as in Virginia.

Examiner of Surveys Dave M. Gibson is leaving the Forest Service to engage in private work. Mr. Gibson has been with Acquisition since the inception of the work and it is with regret that we see him go.

Examiner of Surveys Denman has been engaged on the Olmsted work for a number of years past and also on the survey of the extensive bodies of land which adjoin these lands.

Examiner of Surveys Sloan is engaged on the surveys for elimination of water power sites on the R. G. Wood lands in Georgia, which, under the purchase agreement, can be withdrawn by the vendors of this property. This piece of work is being vigorously pushed in order to have the revised data at hand at the time the Wood lands are brought for condemnation which will be during the June term of Federal court.

It was interesting to note the extent of the water power developments which are being surveyed in North Carolina, South Carolina and Georgia. The water power of this region has not begun to be utilized and it undoubtedly will prove of great economic value to the South. This cheap power is probably one of the reasons for the large increase in cotton mill developments in this part of the country. Many new plants have recently been or are now being constructed along the Southern Railway from Atlanta, Georgia, to Salisbury, North Carolina, and even further north.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

May 24, 1920.

Progress of the Appropriations Bill

In accordance with a plan of the Department a recommendation was made to the Senate Committee decreasing the number of $900 clerical positions and increasing the number of higher paid positions. It was proposed that our 19 clerical positions at $1,800 be increased to 26; our 21 positions at $1,600 be increased to 28 and our 9 positions at $1,500 increased to 29. To offset this our 122 clerical positions at $900 were to be reduced to 62.

As the bill is reported from conference no increases are made in the number of $1,800, $1,600, and $1,500 positions; but unfortunately the reduction of $900 positions from 122 to 62 was accepted in part and the number of $900 positions provided for was decreased by 22. This puts an end to our hopes of being able to make some merited promotions.

As the bill was reported by the conferees it carries an appropriation of $50,000 to enable the Secretary of Agriculture to cooperate with the War Department in the maintenance of air patrol for fire prevention and suppression of the National Forests of the Pacific Coast and the Rocky Mountain regions. A clause has been added, however, which provides that no part of this appropriation shall be used for the purchase of land or air planes or for the construction of buildings.

The question is often asked "Why the appropriation of $125,000 for employment of Forest Supervisors, Deputy Forest Supervisors, Forest Rangers, and Forest Guards?"

The history of this item is somewhat involved. In the original estimates to Congress these employees were transferred to the Miscellaneous Roll, using the same wording quoted above but calling for an appropriation of $1,673,540. Although Colonel Graves urged this transfer to the Miscellaneous Roll as a matter of great importance to the Service, the committee decided, after long consideration, that it could not abandon the Statutory Roll and requested that a draft of a new Statutory Roll be submitted. A new Statutory Roll was then presented which carried promotions greater than those finally approved by the committee. In order to include these promotions without exceeding the limits which had been placed upon the total of statutory salaries for the classes concerned, we dropped 40 Ranger, 15 Supervisor and 9 Deputy positions. The final recommendation of the committee, which has remained in the bill, was that promotions of from $100 to $180 should be made in the positions remaining on the roll; that the statutory positions should be dropped as offered by the Forester and that our original item of $1,673,540 be reduced to $125,000. Of this sum $66,000 is required for statutory guards not otherwise appropriated for and only $59,000 is left although $87,000 worth of statutory positions were dropped. In other words a net reduction of $28,000 in the item has been made. The new item then, which in future will be known as "Miscellaneous Forest Wages" is all that remains of an item which was intended to provide for all the Officers in the classes mentioned on the Miscellaneous Roll.

- Roy Headley.

What can you save?

Many members of the Forest Service have said that they would be satisfied to continue in the work if they felt assured of accumulating enough to live comfortably when no longer able to perform Service work.

The following figures are offered with no intent of justifying present rates of compensation in the Forest Service or of otherwise arguing the salary question. They are given only as a suggestion of what may be done if a Forest officer is able consistently to save a certain percentage of his salary, and to illustrate what percentage he should save if he is to provide for a reasonable competence in old age.

Saving, like the accomplishment of other difficult things, is largely a matter of determination. It is believed that most men who have been in the Service for the past 10 or 15 years could have saved 10 per cent of their salaries had they set out with a firm determination to do so. To illustrate what might be accumulated by saving ten per cent of one's salary and allowing its accumulation at a compound interest rate of 6 per cent, the case of Ranger A is taken. He entered the Service at approximately 25 years of age. It is assumed that he will be able to perform the duties of ranger until the age of 60.

He served two years at $900, three years at $1100, five years at $1200, one year at $1300, one year at $1400. He now receives $1500. (All periods and rates are approximate.) Should he continue at his present rate until the age of 60 and save during his entire period of service 10 per cent of his salary and so invest it as to return 6 per cent compound interest he will have at retirement approximately $14,000. If he can save 20 per cent he will have $28,000. If he invests his savings so as to make a larger or a smaller return the amounts will of course vary accordingly. $14,000 at 6 per cent plus what he will receive under the retirement bill, which has now passed both houses of Congress, will equal his present salary. (The bill provides for retirement at 70, but in case of inability to perform the work he would be retired at an earlier age.)

Another case is that of Forest Inspector B. He also entered the Service at approximately 25 years of age, served two years at $1000, one year at $1300, one year at $1400, one year at $1500, three years at $1800, two years at $2000, one year at $2100, one year at $2300. His present salary is $2700. If within two years he is advanced to a salary of $3000 and continues at that rate till the age of sixty his savings, figured on the same basis as above, (10 per cent), would amount to approximately $23,750. This sum at 6 per cent plus the amount he would receive under the retirement bill would amount to approximately $2400 per year.

It is not argued that ten per cent is the amount that one should save or that six per cent is a representative return on investments. The suggestions are made merely as food for thought on a subject that no salaried person should fail to consider, unless blessed by the existence of a rich aunt or her equivalent.

- Fred Morrell.

Tact

A great deal has been said about the use of tact in our everyday business and social relations with the general public. Undoubtedly the keynote of the successful administration of a ranger district or a National Forest may be directly traceable to the tactfulness of the Forest officer in charge. Again, where very little tact is practiced, our administration becomes a failure in a more or less degree.

The public and "public policy" play a mighty big part in every business now under the "sun." There is no sidestepping this, even in the Forest Service. Tact is one of the most powerful and wonderful agencies within our reach in discharging this important function as Forest officers.

Tact has been defined as just plain horse sense in dealing with other people. That describes it all right, but the formula is not quite so easy to fill. A lot of brains is required in this world simply to gain the reputation of having common sense. Common sense, it seems to me, is not something with which we are endowed so much as it is the ability to comprehend that which is just the "common opinion" or "common sense" of mankind. Do we know what that is? The kind of common sense that causes one to jump away from in front of a moving train or automobile, pay due respect to the hind quarters of a mule, or give some attention the signs along any of our automobile highways. The same kind of common sense translated into human relations will soon give one the reputation of being tactful.

Tact does not mean simply the ability to say the right word at the right time and in the right place, nor does it mean "policy" in the sense that it is often deceit or positive discourtesy, if not gross insult. Tact goes deeper into the whole question of human relations. It is grounded in a deeper intelligence and a greater sincerity. It is not a falsehood but the easiest representation of the truth and the performance of the appropriate deed or thing to be done. A man who lies has no tact. A man who exaggerates has no tact. A man who "flies off the handle" has no tact. The tactful man uses his brains. The selection of the right words, to be sure, is important, but, it seems to me, tact, is about one-fifth talk and four-fifths judgment. When one has not tact, everyone notices it.

The Forest Officer with tact follows a definite line of procedure. He makes the touchy, "grouchy" sheep or cattle-grazing permittee a pleasant fellow to talk to. He connects with the interest of the permittee or timber sale operator and so overcomes his antagonism to the terms of the permit or sale agreement and thus secures a strict compliance with the least possible friction between the Service and the individual concerned. If a user of a Forest has had, or thinks he has had, unpleasant experiences in connection with his relations to the Forest Service, the Forest Officer doesn't, for the sake of being agreeable, attempt to "pass the buck" by blaming his superior or the Service or someone else. He enters sympathetically into the user's troubles and attempts to adjust them by preservation of good will. Above all, he conveys the impression that the organization of the Forest Service is a unity and that he is a part of that personality.

Tact involves the ability to comprehend quickly the feelings, opinions and prejudices of others. A tactful man is a student of human nature, who reaches men's moods, temperaments, interests, vanities, thoughts, likes and dislikes. He has a fine regard for the rights of others and for the etiquette and proprieties of the game. He adapts himself to the conditions. The big man is always the adaptable man at no sacrifice of leadership or of his duties to the Service.

The habit of inveterate courtesy is a valuable aid to tactfulness, and so is its team-mate -- the cheerfulness of a glowing personality. Courtesy and cheerfulness disarm antagonism. They expand energies. They are contagious. A smile, too, doesn't cost a penny, but it helps a lot. The counterfeit smile, the silly grin of the empty-headed, smart funny or insincere imposter should, of course, be avoided. The smile should be started as early in the morning as possible. In this way it is likely to continue. On the other hand, if the day is started moodily or with a grouch, it may prove to be the forerunner of one's attitude the whole day through. These qualities are certainly wonderful and of material value to any man, and particularly is this true in our own experience as Forest Officers.

Tact, courtesy, cheerfulness and a smile are all branches from the same root. Alone they may not enable a person to fill a big job or accomplish a big undertaking; they will not make an ignorant man wise nor a stupid, lazy man successful, but they are tremendous factors in success in almost any line of business common to society today. If this is true along other lines of business and professions, it certainly must hold good in ours.

- Kreutzer, Gunnison. in Dist 2 Bulleti

Wanted - An Aerial Mapper

The following advertisement in "The Aeroplane in Canada," calling for an aerial photographer to map timber limits is probably the first "want ad." of its kind ever published.

Aerial Photographer: - This Company seeks the services of a man with successful experience in the work of developing and printing aerial photographs and who is capable of making up maps from these photographs. Returned flying officers with experience and knowledge of this work are eligible for this position. During the summer of 1920, this Company plans to photograph its timber limits from the air in order to obtain accurate aerial maps. It is essential that applicants shall have done this work at the Front. Applications may be directed to the offices of this Company, Price Bros. & Co., Limited, Quebec."

The company has ordered a large seaplane for use in connection with their timber operations. The seaplane is being built by Hoffer Bros., and has a 42 ft. spread and a passenger capacity of two. It is considerably larger than the flying boat which was built by the same company for the B. C. government. The plane will have a Curtiss 100 H. P. engine.

(Taken from Canadian Forestry Journal, April, 1920.)

Book Paper Situation

Book paper is a general term designating roughly all the grades of print paper except newsprint. In distinction from newsprint it is made chiefly from chemical pulp, while the former is usually about 80 per cent mechanical pulp.

There are some 6,000 publications in the United States using book paper. The largest consumers are publishers of certain weekly and monthly magazines. Several of these concerns use more than 10,000 tons a year each.

In 1916 there were 40 companies operating 70 mills, the bulk of whose output was book paper, and a number of other mills which manufactured some book paper in addition to various other grades. The output of the principal book paper mills in 1916 aggregated more than a million tons, valued at more than $87,000,000. The principal mills are in the northeastern and north-central portions of the United States.

Book paper is chiefly made of soda and sulphite pulp, but a large amount of waste paper is also used. The principal woods used for the production of the sulphite pulp, in the order of their importance, were: Spruce, hemlock, poplar, balsam, beech, birch, and maple; and of the soda pulp: Poplar, cottonwood, yellow and jack pine, chestnut, beech, birch, maple, spruce, gum, basswood, yellow poplar, balsam, and hemlock.

The countries producing the largest amount of book paper, next to the United States, are Germany, Ireland, Canada, Japan, Finlad, and Newfoundland, in the order of their importance. The imports of book paper into the United States have steadily declined since 1911, while our exports have increased.

Timber Sale Receipts

Timber sale receipts from all Districts for the first ten months of the present fiscal year show an increase of $385,000, or about 134 per cent of the receipts for the similar period in the fiscal year 1919. The sale receipts through April 30 exceed those for the entire fiscal year ending June 30, 1919, so that receipts for the next two months will represent the net increase for the year. This is true not only for timber sales but for all other forms of timber activities, including timber settlement, timber trespass and turpentine sales.

All Districts show an increase, although that in District 3 is very small. District 5 has considerably more than doubled its receipts and District 2 shows an increase of 52 per cent. May and June are normally the months of heaviest receipts, especially in the Pacific Coast District and if the present rate is maintained, the increase at the end of the fiscal year should be well over $400,000.

New Legislation Proposed for West Virginia

At the meeting of the Central West Virginia Fire Protective Association held the first week in the month, the legislative committee recommended the drafting of three bills, designed to give adequate protection to the forest lands of the State and to reforest such areas as may now be in need of a new growth, to be introduced in the next State Legislature. Briefly, Bill No. 1 provides for a board of forestry and a State forester, thus separating the forestry activities of the State from the present Game and Fish Department. Bill No. 2 provides for a fire warden system, and Bill No. 3 provides for a patrol by private owners.

The bills were drawn up with the assistance of Mr. J. G. Peters and if enacted, will give West Virginia an excellent basis for the protection of its woodlands against forest fires and the active practice of forestry.

Business Picking up in Pennsylvania

Forestry is booming in the Keystone State these days. Backed up by Governor Sproul, who is greatly interested in the work, Mr. Pinchot is going ahead with his characteristic energy and enthusiasm with his plans to show what can be done toward making state forestry effective. From all indications considerable progress has already been made.

Early in May Governor Sproul issued a strong proclamation calling the attention of the citizens of the State to damage caused by forest fires and asking for their assistance in preventing the loss to the State. Ministers, boy scouts, labor unions, chambers of commerce, and other organizations were called upon to join the crusade "to protect ourselves and our posterity."

Mr. Pinchot has dug up an Act of the 1915 State Legislature which authorizes the commissioner of forestry to declare a public nuisance any property which by reason of its condition or operation is a special forest fire hazard and which endangers other property or human life. This law empowers the commissioner to take the necessary steps for the abatement of the nuisance and provides penalties for the failure of the property owner to comply with his orders. A meeting of a number of representative timber land owners was held, at which time it was made plain to them that the law referred to is going to be enforced. Steps were taken also to work up cooperation with timber owners' associations and to provide for patrol of timber and cut over lands. A large number of letters outlining the policy of the department was sent out to other timber land owners.

Cooperation of the State Highway Department has been secured and arrangements have been made for al road crews of that department to assist in fighting fires which occur near them. A meeting has also been held with the representatives of various railroads of the State and plans made for clearing safety strips along the rights of way, patrolling dangerous sections, and enforcement of rules relating to spark arresters and ash pans. Letters have been sent out to all county commissioners requesting their assistance in preventing and fighting forest fires and calling upon them to see that the county authorities take the necessary steps to secure the punishment of persons who violate forest fires.

Bricks out of Wood

It is reported that a company is being organized in Louisiana which will manufacture a wood composition brick. In addition to wood, such materials as rice straw, weeds, and similar material will be employed. As regards the durability of these bricks and purposes for which they may be used, the report sayeth not.

A Purely Chinese Industry

A strong combine of Chinese firms in Hongkong, headed by Yuet Loong Chan & Co., controls the importation of "Soo Mook" wood from the Philippines; and makes the red ink or paste that up and down the Chinese Republic is used for inking the "chops," or seals, that the Chinese employ in affixing their signatures to documents of a formal nature. In Iloilo and other parts of the Philippines the tree is called the "cibucao," and it has its interest for Americans in that it provides also the dye which stains red the paper that the Chinese use to make the firecrackers that the American small boy has long been familiar with on the Fourth of July. Thus the tree, which is so little known to the world at large, gets rather amazingly distributed in the form of dye, inking "chops," for China and coloring firecrackers for the United States, as well as helping in coloring Chinese cloths and stationery. The wood is boiled to obtain the stain, and the process of extracting the dye is said to be crude and wasteful; but the syndicate is strong enough to regulate the output and price, nor is there any immediate likelihood that its monopoly will be taken away from it. Sooner or later, however, one may reasonably expect that conservation will observe the unnecessary wasteful Chinese way of obtaining the product, and raise the slogan, "Save the Soo Mook," for the process, it is said, could be much more economically conducted if the dye were extracted in the Philippines and exported to China.

Clothing from Trees

How would you like to have a tree which grows ready made clothing? That is what the upas tree of Java is said to do. According to the "Canadian Forestry Journal," in the bark of this tree is a natural cloth only requiring the removal of the soft cellular stuff from between the woven fibers in order to render it available for use. The cylindrical section from a small limb will, it is said, furnish the leg for a pair of trousers or a sleeve for a coat, while from the larger branches the body of the garment can readily be obtained. Apparently all that is necessary is to find the tree, pick out the proper size branches, and do a little sewing.

A small grove of these trees would be a handy thing to have around the house in this day and time.

The inner bark of another species of tree in tropical South America is said to yield an excellent cloth, the fibres of which are interwoven as much as though the fabric came from a loom. All that is necessary is to wash and beat out the cellular substance from the interstices. When dried, the "cloth" is light, flexible, and quite suitable for making up into garments.

The famous "tapa" cloth of Polynesia is made from the inner bark of a paper mulberry. The finest quality of this cloth can be bleached to snowy whiteness and is as fine as muslin. In tropical Africa the inner bark of a certain leguminose tree is utilized in the same way. Indeed, it is surprising to find how widely tree barks are employed for material the world over.

We also have with us the silk necktie, socks, and other garments made out of wood pulp.

The Capper Resolution Nears Completion

As the date set for the completion of the report called for by the Capper Resolution draws near activities in the Branch of Research are taking on a feverish aspect. It is commonly reported that the men engaged on the work will apply for six months' leave when the report is completed and it is probable that one or more will leave for long sojourns in padded cells. Be that as it may, present indications are that the report will be submitted on time.

Just what the report will contain, the most diligent efforts of the Bulletin representatives have been unable to learn. Whenever attempts have been made to obtain inside information the men in Research have immediately become suspicious and have refused any other statement than that they were too busy to talk. The care with which the material is being guarded and the various precautions which are taken to prevent any information concerning it being made public, as well as occasional hints dropped by some of the less suspicious members of the office, indicate that the report is loaded with dynamite.

It is understood that final plans have not been made regarding the method in which the details will be made public, after the report has been submitted to Congress. It is quite certain, however, that the lumber industry in general is much concerned about the contents of the report and the recommendations which will be made, and it is understood that a number of plans are being held in abeyance until these are known.

White Pine Blister Rust

Mr. Sudworth reports that recently shipments of so-called "Austrian" and "Scotch" pine nursery stock from the quarantined districts of Michigan and Wisconsin to Idaho and Montana have been intercepted which on investigation were found to contain white pine. The shipments were seized and at the present time four cases are pending before the United States courts against the nursery men who made the shipments. Mr. Sudworth said the evidence in each case is complete and it is believed there will be no trouble in convicting these men for violation of the Federal quarantine.

Ringland's Work in Czechoslovakia

Captain A. C. Ringland, whose work in connection with the Mission of the American Relief Administration for Czechoslovakia has already been commented on in the Bulletin, has evidently done big things and won the undying admiration and gratitude of the Czechoslovaks. A recent issue of the "Cesky Svet" contains his picture with the caption "One of the finest workers America sent to Europe to organize the help for suffering nations. It is due to the energy and tact of Captain Ringland that the 'Cs. pece o dite' could be established so soon and in full harmony with the charitable organizations already existing in the Republic."

In several other places in the magazine Captain Ringland's work is referred to with the highest praise. From the latest accounts available Captain Ringland is still in Czechoslovakia and no date has been set for his return to the United States.

Forest Products Laboratory Notes

T. R. C. Wilson of the Section of Timber Mechanics, is in San Francisco. While there he will give a talk before the National Foreign Trade Council on boxes and will use the box movie film.

Thursday, May 13, at 4:45 a 5 reel motion picture on the manufacture of wire and steel was shown. This was in connection with the meeting of the 4-Ones Box Association which met at the laboratory May 13 and 14. A representative of the American Steel and Wire Company gave the talk in connection with the movie.

Better fire protection and more complete and profitable utilization were brought out as the principal things needed to make forestry on private land a practicable business investment at the spring meeting of the Madison Section of the Society of American Foresters, Monday night at the University Club. A. L. Osborn a well-known lumberman of Oshkosh, in discussing the application of a national forestry policy to Wisconsin, said that progressive lumbermen would be ready to practice conservative lumbering so as to secure a new crop just as soon as the State developed a fire protection system sufficiently effective to assure a reasonable amount of safety to their investment.

Howard F. Weiss, former Director of the Laboratory, pointed out that trees will be grown as soon as there is enough profit in growing them and that one of the surest and most promising ways to make forestry profitable is by developing new and more valuable ways of using as large a part of the tree as possible.

A short but very illuminating talk on the resources and possibilities of Alaska was given by C. M. Flory, Superintendent of the National Forests of Alaska who said that Alaska's forests with their tremendous paper pulp possibilities would eventually constitute the most valuable and permanent natural resource of that territory.

As a result of the interest shown at the meeting, a committee consisting of O. T. Swan, Chairman, A. L. Osborn, H. F. Weiss, C. P. Winslow, O. M. Butler, and D. R. Brewster was appointed to prepare plans for arousing greater interest in the development of Wisconsin's forests.

The following were visitors at the laboratory this week:

Mr. Schletty, Assistant Manager of the Mandt Wagon Works and Mr. Fuller, Manager of the Minneapolis branch of the Moline Plow Company. The main object of their visit was to consult with J. A. Newlin, Section of Timber Mechanics, concerning the substitution of pecan (hickory) for oak in wagon construction.

C. H. Flory, Superintendent of Alaska forests. Mr. Flory is interested in the Pulp and Paper sales on the Tongass forest.

Messrs. Smith, Lucas, and Deutman of the National Zinc Separating Company, who stopped here on their return from a conference with the officials of a large sulfite mill relative to the use of liquid sulfur dioxide in pulp manufacture. Much interest is being evinced in this possibility in various parts of the country. Cooperative mill scale trials will probably be made this summer.

P. F. Poorbaugh of the Philippine Islands, who is interested in the pulping qualities of species of wood peculiar to the Islands.

Messrs. O. W. Smith and A. G. Van Eman of the Owyhee Chemical Products Company, Chicago, Ill. They brought with them a sample of jelly rock to be experimented on. They think it will make a highly colloidal paper filler.

G. D. Bearce, of the Newsprint Service Bureau, has joined the Section of Pulp and Paper and will devote his time to a study of the methods of pulpwood measurements.

District 1 - Northern District

Arrangements have been completed with the Monarch Mining and Power Co., of Helena, Montana, for the donation, with freight prepaid to Madison, of about 500 pounds of lodgepole pine which the Laboratory has agreed to run through its "still." The purpose is to determine the yield of flotation oils and other products from this species. It is expected that even though the yield may be small compared to the yield from the fatwood of Southern pine, results of the test may have large economic possibilities in District 1 region. Wood oils are in general use for the reduction of all sulphide ores. The present supply for the mines of this part of the country is obtained from southern States, some of the products coming as far as from Pensacola, Florida. The freight charge on these shipments is heavy, even in carload lots, and there seems to be considerable ground for the hope that it will be possible to produce local oils at a material saving over the delivered cost of the oils from the South. The oil secured will be run in several flotation tests at laboratories in this region and in addition, possibly, at the laboratory of the Bureau of Mines at Seattle.

Small sample shipments of lodgepole pine lumber have been sent from Bozeman, Montana, to the Laboratory and to the Haskelite Manufacturing Corporation at Grand Rapids, Michigan, for tests of the suitability of the species for plywood construction. Lodgepole lumber production in District 1 is on a rather small scale compared to the operations in the white pine country in North Idaho, but this condition would be materially altered if there were an outside demand for the lumber. The results of the test will be of considerable importance to the "Lodgepole Forests." It is hoped that on account of its low density and relative freedom from serious defects lodgepole will be found to be a suitable wood for use for this purpose.

District 2 - Rocky Mountain District

L. H. Douglas, Inspector of Grazing, has returned from the joint meeting at Delta, Colorado, which was attended by District Forest Inspector Kreutzer, Supervisors D. S. Jeffers of the Uncompahgre and J. W. Spencer of the Battlement Forests, three County Agents and an Agricultural Agent connected with the Reclamation Service. The meeting was called by Supervisor Jeffers in order to arrive at an understanding regarding the relationship between the practices advocated by the County Agents and the possible resulting demand for National Forest range, and also to arrive at a conclusion regarding the dependence of applicants from whom the demand for range in the valleys of the Uncompahgre, Gunnison, and Grand Rivers is coming. A classification was agreed upon defining the comparative dependence of those engaged in raising beef cattle or sheep, those engaged in diversified farming and those engaged in dirying.

One of the most interesting points brought out was that the County Agents are advocating that a certain portion of every farm unit be kept in irrigated pasture for summer use. If there is any general acceptance of this practice, it will relieve the demand for forest range from farmers who keep a small number of beef cattle, dairy cattle or sheep and will enable the Forest Service more definitely to define dependence of applicants strictly in the stockraising business as compared with those engaged in both farming and stock rising.

In order to test out the possibilities of the wireless instruments, Telephone Engineer H. R. Kylie had one set taken to Colorado Springs and then sent phonograph music from the Denver office. This was picked up very readily by the other set at the Springs, 70 miles away. The aerial at Colorado Springs, however, was not large enough to radiate sufficient current for a message to be heard in Denver.

The experiment was the occasion for a great deal of interest on the part of the people in Colorado Springs, both amateur radio men and newspaper men being present. It is thought that by changing the receiving apparatus somewhat, it may be possible to increase its receiving range considerably.

"Colorado Discovered" is the title of a series of four articles appearing in "Outing," beginning with the May issue. These stories were written by Editor Albert Britt, who visited Colorado last summer. The first article features the Mt. Evans Recreation Area and shows photographs of the improved Beaver Creek Camping Grounds and also the Mt. Evans Rest Cabin.

The forest fire season has already opened in Minnesota. Telegraphic report has been received from Supervisor Dahlgren at Ely that three large fires are raging on land to the north, south and east of the Superior Forest. Very little damage has thus far been done to Government timber, but the situation is serious and extra fire guards will be put on immediately for patrol work. On account of the heavy pall of smoke hanging over the country, lookouts on the Superior Forest have been practically put out of commission. The Supervisor is keeping in close touch with fire conditions and reports the situation well in hand to date.

District 3 - Southwestern District

Arson squad tactics brought the first fire scalp of the season into the Coconino camp on May 5. Twenty-seven hours elapsed from the reporting of a fire by Elden Lookout to the payment of a fine in a justice-of-the-peace court in Flagstaff by a local young man. In between was a chase involving the search for a car bearing a certain set of tires, the owner of a neat little foot print, and also a handkerchief bearing a laundry mark. Incidentally an abandoned camp fire that caused a class B fire was an incentive to the search. The handkerchief finally solved the problem and the rest of it was easy. Special credit for this clean-cut job is due Deputy Supervisor McKenzie. Who's going to hang up scalp number 2? Lots of room in the teepee.

"Two silver tips have been killing stock on the head of Tonto. They killed seven head on Roberts Mesa about two months ago. A. L. Haught chased them out on top of the Mogollon Rim and lost them in the deep snow. Later they showed up under the Rim in Doubtful Canyon, where they killed a cow for Bowman's. About two weeks ago they were at the Davis Ranch on Tonto. Men and dogs were assembled and a chse started. Owing to the heavy wind that day the men were unable to hear the dogs and the trail was lost in the Horton Thicket. These bear have never gone into winter quarters."

- Tonto

In our mail recently this request: "Please mail me information relative to your parks, Forest Reserves nd the land of the Hopi's and anything of material value to a tourist." At first glance this is a laugh producer. Look a little deeper though. First of all, remember that the average Easterner knows infinitely less about the West than the Westerner knows bout the East. One thing, we're so much larger nd there's so much more variety to our region. This gentleman from Indiana will get as courteous a reply and as much information as we can give him. Similarly, it's up to us to educate every last one of them that we can, either by mail or when we get them out here on their tours. Their questions may be wild and fanciful, but patience and the handing out of the essentials will ultimately mean a graduate student of the higher and deeper lessons of the National Forests and the West in general.

The District expects to receive shortly from the War Department four wireless telephone sets for experimental use. This material represents the first acquisition of telephone equipment under the provisions of the recently passed Kahn Bill.

It is remarkable what dependency a forest community eventually puts in its local forest office. The relations of the Carson office to the town of Taos are no exception. Supervisor Loveridge tells a District Office friend of the climax in this line recently. Says he, "We are also a bureau of information as to the Red Cross, street improvements, influenza and other things. Why, would you believe it, the other day the village butcher sent up a cockroach for identification and method of extermination! It's a great life."

Occasionally there is a man who can do office work in a room where there is a crowd of people. But does the man exist who can concentrate his mind and do office work efficiently in a room where there are small children, or even with small childred in an adjoining room? For my part I find it an uphill proposition.

My station has a 3-room house and one of the rooms is used as an office. The office is adjacent to the kitchen and is heated from the kitchen stove. I have two little children and they are full of life and energy - just as any normal child should be; and in winter time they have to play inside the house. My wife does the best she can to keep the children from disturbing me, but it is a hopeless job to keep a normal healthy child quiet. The result is that I am greatly handicapped in doing office work and at times I catch myself getting grouchy. This situation is not fair to a ranger or to his wife or children.

All of the three rooms here are needed for living quarters yet I have to use one of them for an office. And the space in the office room is entirely inadequate for the purpose.

Separate office buildings of suitable size, planned with deliberation, so that they will be properly arranged and lighted and with closets for closed files and supplies, are necessary to proper and efficient ranger administration.

- F. L. Kirby - Crook National Forest.

(We are with you, Kirby. You've laid open a sore spot that we have long been trying to correct and will eventually eliminate. Funds, funds!)

Shop was run from December 1 to April 22. Number signs made 3845. Cost per sign $0,261, exclusive contributed time. Four statutory ranger positions utilized during winter on the work. Signs distributed as follows:

Apache	193
Carson	194
Coconino	318
Coronado	292
Crook	172
Datil	329
Gila	347
Lincoln	406
Manzano	74
Prescott	155
Santa Fe	780
Sitgreaves	163
Tonto	250
Tusayan	157
Bureau of Public Roads	15
	3845

"Speaking of wind: Certain parts of New Mexico are more or less noted for wind but some of the honors belong to Arizona. Several interesting phenomena, which can be vouched for by reputable witnesses, occurred at Roosevelt recently, viz: (1) a considerable volume of water, after going over the dam spillway, was blown back into the Lake; (2) the Teddy boat crossing the Lake looked like a subchaser in a North Sea Gale (Weekly Events, the movies); (3) the porch of Supervisor Goddard's house was frustrated in an attempted flight by the combined efforts of five Forest officers, two from the District Office, who guyed it down with No. 9 wire (maint., not N. C.). Mr. Goddard was also guyed."

- Tonto Forest.

Anthony and Baker, sawmill operators on the Gila National Forest today purchased 650 M feet of western yellow pine, Douglas fir, Engelmann spruce and Mexican white pine saw timber at $2.50 per M, and 100 M feet of white fir at 50 per M. The timber will be logged and milled in the Black Range and marketed at Santa Rita, Fierro and Hanover, mining towns a distance of 30 to 35 miles from the mill, and in the Mimbres Valley, a farming region 18 miles from the mill. Four miles of road will be constructed to reach the mill which will aid in opening up a portion of the Forest. The mill has a capacity of 6 M feet per day. This operation being located on the Forest, operated by local labor, and furnishing material for the development of the region is a good demonstration of the close relation existing between a National Forest and its local communities.

Looking quite fresh and perky in spite of having back of him over two weeks at the wheel of his car, in which time he covered about 2500 miles of his transcontinental trip from Washington to Los Angeles, our recent Associate Forester, Albert Potter, was surprised by a District Office delegation at a local garage in Albuquerque deep in the mysteries of replacing a blown out tire. After a round of greetings, Mr. Potter was escorted to the office and for an hour a most enjoyable visit was indulged in. Besides some good anecdotes, we managed to get from Mr. Potter his views on the presidential possibilities and other affairs of moment.

It was noted that the Associate Forester - ex that is - still says "we." That's a privilege that comes with 20 years of service. We expect to see much of our Los Angeles neighbor and in fact, he admits that he's going to spend a spell this summer on the Apache trying out a new fishing outfit.

"The long-planned browse study on the Tonto bids fair to become a reality. The original plan was to fence four plots each located in different kind of brush range. The location for two of these one-acre plots has already been decided upon by Supervisor Goddard, Deputy Supervisor Sizer and Grazing Examiners Hill and Talbot. The fencing of two plots is completed. Mr. Talbot plans to spend a week or two in mapping the plots and charting the plants. Very few exact facts are known about the browse ranges of this region and it is hoped that these plots, with full protection from grazing, will help us out upon such questions as how far our brush ranges have decreased in carrying capacity since grazing first began; how fast they may be expected to recover; the amount of annual feed produced; and what new plants will come in or die out. To make these observations of practical value we want to tie them as soon as possible with some real figures on carrying capacity from controlled pastures."

- Tonto Forest.

Forest fires are burning across the Mexican border on lands adjoining the several divisions of the Coronado Forest in southern Arizona and it has been necessary for the officers of that Forest to put out several fires that crossed the line onto National Forest territory. It appears to be a waiting game, as with revolutionary conditions prevailing in Mexico it may be impossible to renew the working agreement heretofore in effect permitting fire fighters to cross the line and extinguish fires before they reached the border.

District One rangers and other officers while in the big sticks this summer will "roll 'em" since tailor made cigarettes are taboo, according to an agreement reached at the recent fire conference at Savenac Nursery. Another blow at the high cost of living.

The new D-3 fire warning cardboard posters seem to be getting across if recent newspaper comment is a criterion. Put 'em all up! There will be a new issue next year.

District 4 - Intermountain District

THE RANGER'S LIFE

"Nights that are spent in the open,
Under the whispering trees;
Slumber that's sweet and dreamless-
Lullabys sung by the breeze.
Waked by the first red sunbeam
Unto no day of strife-
Waked to a day of pleasure-
Such is the ranger's life.

"Over paths flecked with sunshine
Threading the tree-lined ways;
Fording a snow-born streamlet
There where the big trout plays;
Surprising the elk at the dawning,
The bear at his clumsy play-
Feeling the heart-beat of Nature-
Such is the ranger's day.

"Think you the city can call him?
What charm has the marketplace?
Why should he turn from the mountains,
Inviting, from peak to base?
Town's but to dream of at even,
When camp fire smoke curls high,
So lives the forest ranger
Under the western sky."

--Arthur Chapman.

On April 29, the fire season began with a nine acre brush fire on the Schell Creek Division of the Nevada Forest. Ranger Lloyd Robison was on the job and arrested the Mexican sheepherder who set the fire, brought him to town and he was lodged in jail until the U. S. Commissioner could hear the case. The Commissioner fined him $50 and $50 costs. This first incident in the 1920 season should serve to impress the public that the Forest Service means business when it sets out to eliminate "man made" fires. Imposition and collection of a fine by a U. S. Commissioner is perhaps somewhat unusual --- but let's keep up this 100% record in Law Enforcement anyway.

"This warm spring weather surely makes one feel at peace with the world, but the hardest part is to stick close to a desk, when the village "sports" are playing at horseshoes, and ball, directly under the open window, more especially when the clink of the horseshoe is heard, and we know someone must have made a 'Ringer'."

--- Wyoming Wizard.

The State Game Warden has granted permission to Deputy Supervisor McKee of the Bridger Forest to donate the interlocked deer horns recently found on that Forest to the University of Wyoming at Laramie, where they will be mounted and placed in the museum of the school.

The County Commissioners of Valley County, at a meeting held in Cascade Monday, agreed to construct a portion of the Cascade-Knox and the Warren Wagon Roads this year. Owing to the limited amount of funds the entire roads will not be completed until some future date when additional funds can be appropriated.

District 5 - California District

Cooperative funds for the construction of the following camps have already been furnished and these camps are now either partly developed or the development work will be undertaken at an early date.

Angeles: Camp Cajon - approximately $15,000 spent to date. The cost when completed will be about $25,000. Funds are furnished by a large number of towns and individuals in the vicinity of San Bernardino.

Forks of San Gabriel River - $400 by Los Angeles Chamber of Commerce.

The Los Angeles Motor Car Dealers Association appropriated $650 for improvement of the Grout Camp at Big Bear Valley.

Cleveland: Orange County Camp - $500 from Orange County Board of Supervisors. This money was appropriated from the County advertising funds and the District Attorney held that this was a legal use for such funds.

Camp in San Jacinto Mountains - approximately $600 for the development of camps near Strawberry Valley are assured by the Associated Chambers of Commerce of Riverside County.

Mono: The County officials of Mono County have promised to supply all the labor to develop a camp on Woodfords road, provided the necessary materials are furnished by the Forest Service.

Sequoia: A note received from Cunningham assures us that the Potterville Chamber of Commerce will raise $300 for development of Coffee Camp on the Tule River.

Sierra: $600 has been appropriated by the Fresno County Board of Supervisors for development of public camp at Huntington Lake.

$550 donated by Merced County Associations for the Merced Camp on the Wawona Road to Yosemite.

Stanislaus: The Oakdale Chamber of Commerce has appropriated $400 to fix up the Ranger Station camp on the Tioga Road and the Secretary of the Chamber of Commerce at Modesto is going to appear before the Board of Supervisors and ask for additional funds for this same camp in order that it may be fixed up in first class shape. The Oakland Chamber of Commerce has agreed to spend at least $300 this year on the Swimming Pool camp site on the Tioga Road and hope to bring the amount up to at least $700 before the season is over. The State Highway Commission has agreed to improve the Bungalow Bridge Camp Site on the Tioga State Road at once, at an expense of $2,500. The Tuolumne County Board of Supervisors will spend not less than $500 at once to improve the Brightmans Flat Public Camp on the Sonora Pass Road.

This is a total of $3,800 cooperative funds definitely promised for the Stanislaus. The other Supervisors of the District will have to go some to beat Wulff.

These are strenuous days. Last week the stockroom turned our a wagon load (literally) of posters and maps to the Forests. This week an intensive concentrated campaign in coöperation with the State Board of Forestry and the Fire Prevention Bureau of the Pacific is being handled. It is in connection with "Forest Protection and Fire Prevention Week," May 23 to 29, recently so proclaimed by the Governor. It means, among other things, 6,000 mimeographed pieces, with envelopes to address, 650 copies each of 6 news stories, and several other things, including 200 slides for Motion Picture houses.

A higher salary looked good to the teacher of the Williams Creek school, Covelo District, so she left. It seemed for a time as though the school must close for lack of someone to teach the young idea how to shoot, but finally Mrs. Douglas Robinson, wife of District Ranger Robinson, stepped in and filled the breach.

Now, Mrs. Robinson, like the majority of rangers' wives, has little to do, normally, except such simple things as housework for her family, entertainment of the various visitors, - forest officers and others, - acting as telephone operator for a number of lines, helping her husband in various ways; and, in fact, acting as an assistant to him in much of the District work. And here is another job - a community service - which she was well qualified to fill.

So, as we have said, she took it, and the 11 pupils that go with it. Applying scientific management to the plan of the campaign, she decided that the school must be held at the Ranger Station itself. Now, therefore, visitors to the Covelo Station are warned that they will be expected to address the Williams Creek School.

All honor to Mrs. Robinson, and to the other Forest Service women who are making their influence felt in many an out-of-the-way corner in the West.
(ed.)

Approximately $1,000 has been raised in Ojai Valley for reconstruction of the Ocean View Trail from Ojai Valley to Stanley Park, 2 miles from the ocean.

On April 24, Ranger Hunt of the Santa Barbara, in attempting to pass a truck near Pacific Grove, was crowded off the road and severely injured. His auto was overturned, his right arm was fractured and he sustained sundry bruises and cuts about the head and face. As you can not keep a good man down, Hunt has already been taken home from the hospital, and is getting along in good shape.

The look-out fireman at Angora Peak, near Fallen Leaf Lake, had considerable trouble with camp fires, which spread through heavy duff, last year. In order to drive home to the hikers and picknickers the fact that the duff was inflammable and heavy, he staged a little demonstration at Fallen Leaf Lodge one evening. Home made posters, announcing the demonstrations, were drawn and prominently displayed. Sections of the duff were brought down from the higher country and put together. On them a rock fire place was built, and in this fire place, late one afternoon, a camp fire was started. The fire was allowed to burn for 1-1/2 hours, when it was put out with water and earth.

Then at 7:30 P. M. came the demonstration proper. A big crowd had assembled. The fireman called attention to the fact that forest fires had started from camp or picnic fires, and that they had spread because, apparently, the campers did not realize how deep and inflammable the duff actually was. After explaining the nature of his demonstration and how he had put the fire out, he showed that the fire was actually dead within the fireplace, and to prove it got some men in the party to feel through the ashes.

Then, to everyone's surprise, he demonstrated that the fire had spread fully 5 feet outside the fireplace and was then actually smouldering in the duff.

The demonstration was a huge success and the fireman reported only one such fire afterwards.

As a result of persistent application, intelligently developed, Mr. Shinn's educational material is now going to, and being published by, a specially selected list of 60 California newspapers, with a combined circulation of 178,850 copies. The following, which is by way of illustration, will be of interest: A paper in a Bay City had ignored the material sent them. Mr. Shinn looked up some of the employees and found, in the Editor's office a University of California graduate, who, it seemed, was of Jewish extraction. When the next item was ready for distribution it was sent to this man, together with a note recalling college days and copy of a Jewish magazine. The item was printed and the paper has been using Mr. Shinn's material regularly ever since. The personal touch counts big.

During a recent evening rain storm in Big Santa Anita Canyon, Rangers Mueller and Noxon were sitting inside the Big Santa Anita R.S. when they heard a rumble on the mountain behind the cabin. Mueller went to the back door and opened it just in time to hear a dull sickening thud or two which ended the noise but left him a bit uneasy. In the morning, he found his front yard decorated with a boulder weighing approximately 1000 pounds. About four feet from the house was a hole in the ground, where the rock had first hit. Moral - A miss is as good as a mile; but Mueller prefers the mile.

District 6 - North Pacific District

Forest Protection Week, May 23-29, is especially pertinent to District 6, since Washington is at present the largest lumber-producing state in the country, Oregon leads in volume of standing timber, and Alaska offers perhaps the best pulp opportunities, due to its large bodies of suitable timber and abundant water power.

The Weather Bureau here is announcing the special week on its bulletins; chambers of commerce, commercial and other clubs, public schools, colleges, etc., are being addressed on the subject. Forest fire agencies throughout Oregon and Washington are backing the movement to the limit, in time and money. The newspapers are cooperating, and fire stories will appear in most of the thirty weeklies and monthlies published in the District. Movie theatres in Portland, Seattle, and the other larger towns have been furnished appropriate lantern slides. Approximately 1,000 ministers of Oregon and Washington have been asked to give sermons bearing on protection of forests, and justices of the peace are being reached individually in order to secure their full cooperation in fire prevention. Over 20,000 auto windshield stickers and 3,500 special cardboard fire posters have been sent out to 93 towns in Oregon alone. One Oregon supervisor will take advantage of the opportunity of the presence of a Chautauqua in town and will give fire talks during the week. In Seattle students of the Forest School, University of Washington, are giving illustrated talks on forest protection at schools of the Sound cities, and also assisting in putting on window displays for the Week.

Adolph Aschoff, pioneer forest ranger and supervisor, was recently elected an honorary member of the Trails Club. Before establishment of the present Forests, - when the reservation from the Columbia River to California was known as the Cascade, North, Central, and South, - Adolph Aschoff had charge of the North Cascade, including what is now the Oregon, Santiam, Cascade, and Deschutes. His headquarters were at his present hime in Marmot, near the Bull Run Division, where Aschoff Butte has been named for him. He was at first Head Ranger and later Supervisor. Mr. Aschoff is now postmaster at Marmot and is the proprietor of Aschoff's "Mountain Home Hotel," well-known to Portland hikers. He is 71 years of age.

Seven hikers along Eagle Creek Trail recently defaced certain Forest Service signboards by writing their names and addresses on them. Ranger Wiesendanger reported the case to Supervisor Sherrard, who advised the offenders by letter that they must erase the writing or they would be prosecuted. The following Sunday the pencilling was erased.

Forest Supervisor Weigle and Forest Examiners Kan Smith and George L. Drake, - all of whom worked for many years in the Forests of Alaska, - have recently been on detail in the Portland office assembling and checking data on spruce stands, water power, and transportation facilities in the Alaskan National Forests. An urgent need has arisen for putting together in map form the information necessary to answer the many, varied questions concerning opening up of paper-pulp manufacture in Alaska. Mr. Smith left for Alaska May 9, where he will join Forest Examiner Heintzleman, who is making investigations concerning paper-mill sites.

The first fires of the season occurred early in May, on the Rainier and Olympic Forests. The Rainier blaze was easily extinguished. The Olympic fire, on the Soleduck burn, Lake Crescent region of the Olympic Mountains, destroyed a seeded area established about 10 years ago.

The pledge of the Renton (Washington) Sportsmen's Association includes the following:-

"I will use every effort to protect our forests from fire and our wild life from criminal destruction."

Ranger Hartsuck, on the Olympic, is to have a new station, the low cost and high value of which was made possible by the Spruce Production Division, from which the lumber was secured at a price low enough to come within the present limitation on houses.

Members of the U. S. A. Signal Corps Recruiting Detachment and pilots of the Oregon, Washington, and Idaho Airplane Company staged a contest on the night of May 8 to learn if an airplane can hide from a single, high-power searchlight. The Army searchlight proved ineffectual. The flier, who rose from the field at 8:30 p. m., in the direct rays of the light, was no sooner high in air than he switched off his lights, did a few turns, and was thereafter lost to the spot-light.

Supervisor Fromme, of the Olympic, has converted an old launch into a modern fire boat, in anticipation of possible fires starting along the shores of Lake Crescent from locomotives and in connection with much road construction. The "fire boat" has a rotary pump of from 40 to 50 gallons per minute capacity, delivered through 1,000 feet of 1-1/2-inch hose, to an elevation of 250 feet; the pump is driven by a belt from the flywheel of the boat's engine.

Since April 1, 1,040 visitors have registered at Eagle Creek Camp Grounds, but only about one third sign their names in the book kept for the purpose. The camp stoves recently placed on the grounds came in handy during the annual heavy run of smelt. The fish were caught in pans, pails, baskets,- almost anything,- as they forged up-stream in close formation. Those caught near the Camp Grounds were fried on the camp stoves and eaten, with hot coffee, at the clean new tables.

Forest Examiner J. F. Kummel reports the completion of a planting at Eagle Creek made to illustrate reforestation methods to the public. The trees came from Wind River Nursery, and consisted of Douglas fir, silver fir, noble fir, and white pine. They have been planted in two beds of 2,000 trees each.

District 7 - Eastern District

Further details have been received from Supervisor Rhoades,of the accident which resulted in the death of Ranger Carland on May 14. The accident happened at a bad grade crossing near Candler, N. C. Ranger Carland had been out on the Pisgah Motor Road delivering equipment and was on his way back to Asheville for additional supplies. The highway approaches the railway on a stiff reverse curve and the railroad itself lies in a deep cut, the banks of which obstruct the view from the highway until one is almost on the track. Carland was driving a large Nash-Quad truck and evidently did not hear the whistle of the locomotive. The truck was struck just back of the seat and was carried 240 yards before the engineer could stop his train. Carland's neck was broken and death was instantaneous. Ranger Carland was one of the most efficient men on the Pisgah; quick to learn and had a determined will. He was particularly interested in game protection and under his watchful eye game has increased by leaps and bounds in the Bent Creek District. His death leaves a big gap in the Pisgah organization.

The contractors who are to build the Bennett Gap road in to Pisgah have finished their camps and are now at work on the grade. They have a full six months job ahead if the money holds out.

Word has been received that the survey of the Marion-Micaville road on the Boone will be started by the Bureau of Public Roads by June 1. The people in Yancey and McDowell counties are eager to have the project get under way.

W. J. Damotft, who is now with the Champion Fiber Company, and Supervisor Rhoades will spend the last week in May in making an examination of the acidwood possibilities on the watershed of Hooper's Creek in the Boone. A cruise reconnaissance of the area shows 100,000 cords on 10,000 acres. Eighty per cent or more is standing dead timber which was killed 5 years ago. As it stands to-day it is a menace and every effort should be made to sell the entire watershed as soon as possible. The development will involve the construction of either a flume or railroad and the sale means new life in every way to a desolate looking watershed.

A closer utilization of hickory in this section of the Appalachians is promised by the establishment of a large branch of the Pioneer Pole and Shaft Company of Piqua, Ohio, at Biltmore, N. C. Buyers are already in the field.

Look Ahead Acquisition! 100,000 feet of prime yellow poplar was recently sold by the Whiting Lumber Company for $40 per thousand feet on the stump. It is possible that this price may include hauling to a railroad but no information from authentic sources is available as to that assumption. All of us would like to believe it is not a real stumpage price.

Forest Ranger J. O. Brigman of Pisgah Forest has an ingenious device for preventing a Fairbanks-Morse railroad speeder from jumping the rails. He made wire holders. A pail of water is suspended over each front wheel by means o a wire frame. Through a small hole in the bottom of each pail the water drips continuously down on the wheel. Wet wheels do not show any tendency to jump and since making the device and one or two minor alterations, Ranger Brigman has not had a single wreck.

The spring fire season has about closed for the North Carolina forests. On the Pisgah and Boone, logging engines caused all of our fires except one which started from brush burning. The worst feature of the fire question here is the utter indifference of the lumbermen who own the engines. It appears this spring as if we might finally obtain sufficient evidence to make a trespass case hold good against the Carr Lumber Company, operating in Pisgah, the T. T. Adams Compan operating in the Mt. Mitchell division of the Boone and the Hutton and Bourbonnais Lumber Company operating in the Grandfather's Division of the Boone. Our fire problem would be almost negligible if these roads were out of the way. The proof of this statement is shown by the fact that areas without logging roads are unburned.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

May 31, 1920.

Advertising Something We Haven't Got

"Please send by return mail permit for a summer home site on the National Forest. It must be near enough to New York for father, who is a carpenter, to motor back and forth to his work each day. I suppose you also furnish lumber for building. Please state the kind you have on hand and the prices."

This excerpt may be regarded as typical of letters which have flooded the District 7 mail bag as a result of the publication in the "Ladies Home Journal" of an article by Thomas M. Fisher on "Summer Homes in the National Forests." A perfect avalanche of requests has suddenly descended upon the unsuspecting District Office and has made it necessary for one stenographer to devote her entire time to framing replies. Most of the requests are for sites in sections of the country where there are no National Forests and probably never will be. They range all the way from that quoted above to an application for a permit to build a cabin in some isolated section to be selected by us, where the trapping, hunting, and fishing will be good.

And all this because Mr. Fisher in his article failed to make clear where the National Forests are located and to bring out the fact that District 7 hasn't an unlimited supply of sites where advocates of the "simple life" can bury themselves "far from the madding crowd."

It has been very embarrassing to District 7 to have to inform the various applicants that it has no home sites for lease, and undoubtedly the faith of those who have been thus disappointed has been sadly shaken. It would have been just as easy for the article in question to have explained where the National Forests are located and to have stated that District 7 has no home sites. The failure of the author to bring out this distinction, and perhaps the failure of the man from whom he got his information to make these points clear, has resulted in materially lessening the value of the article as publicity for the Service and probably caused the disappointed applicants for home sites to believe anything that they see about the Forest Service is all "bunk."

It is probable that District 7 is not the only sufferer from the article. From all accounts not many of the Forests have gotten far enough along with their recreational plans to know very definitely what they have to offer in the way of summer home sites, and there is a strong chance at least that a number of Supervisors or perhaps even members of other District offices are tearing their hair and wondering what in thunder they will say to the modest (?) requests which are being received.

District 7 unquestionably has a number of areas in the Eastern Forests which are suitable for summer home and camp sites, but before they can be opened up to the public we are going to need some definite plan for their use and development. We do not propose to go ahead blindly and lease the sites we happen to know about offhand merely to satisfy some misguided enthusiast. With our present financial limitations we are not in a position to undertake the rational development of possible recreational areas now and will not be for sometime. But it will be a hard matter to explain this to the readers of Mr. Fisher's article who think that all they have to do is to get a permit and move in to a ready made summer resort.

What has been said in regard to summer home sites applies to other recreational features of the Forests. There is a tendency to spread abroad the impression that all National Forests are wonderful recreational areas; that all Forest streams teem with game fish and that their mountain slopes abound with deer, elk, and bear. And yet lots of the National Forests are mighty poor places to go for a vacation if one wants to have a good time. If we induce people to visit the Forests by giving them a false idea of what we have to offer, or advertise that we can supply certain things and then are unable to fill the bill, we are in exactly the same position as that of a manufacturer who makes false claims for his product. There are enough features on the National Forests which we can advertise to the limit without fear of criticism. Why then should we lay the Service open to criticism by encouraging misleading statements regarding the Forests?

Does it pay to advertise? You bet it does, when you have something that is worth advertising. But most emphatically it does not pay to advertise when you can not back up every claim and statement that you make.

F. W. REED.

Reindeer Expert Wanted! Santa Claus not Barred.

The agricultural appropriation bill for the fiscal year 1921 carries a $25,000 item for the purpose of investigating and assisting in building up the reindeer industry in Alaska. Less than thirty years ago 1200 reindeer were imported from Siberia to Alaska. The herds now contain about 160,000 animals, in addition to which it is estimated 100,000 have been killed by the natives for food and skins.

There is an enormous area of open country in Alaska extending along the entire coast from the Alaska Peninsula north, and also a large part of the interior of the country which seems adapted to the raising of this class of animals. It has been estimated that the range will carry as high as 10,000,000 head of reindeer, and the success of the introduction of these animals into Alaska has attracted so much attention that it now seems advisable to investigate more fully the possibilities of extending the industry, not only as a means of making the natives self-supporting and prosperous, but also for furnishing a new supply of meat to the people of the United States.

The one line of information which is urgently needed is concerned with the grazing of these animals, because there is no possibility whatever of furnishing artificial feed and they must hunt their own living and take care of themselves on the ranges in this region. In order that this study may be along practical lines, the Chief of the Biological Survey, under whose direction it will be carried on, is extremely anxious to secure a first-class grazing man to form one of the three members of the force who will do the work. Of the other two men, one will be a veterinarian who will study diseases, breeds, etc., and the other a biologist capable of investigating the biological side of the question.

The grazing man for this purpose should be capable of carrying out investigations along the same lines as are now followed in Forest Service reconnaissance work. He should be a thorough botanist with good knowledge of range conditions as they relate to cattle and sheep, should have good judgment, and be capable of stufying and investigating this matter in its broadest possible sense. The mere cowpuncher or sheepherder type will not do.

The Biological Survey is willing to pay from $3,000 to $3,600 per annum, and as the work will be carried on for the most of the time in the field, he will receive the bulk of his expenses. His headquarters will probably be at a place called Unalakleet, which is about 100 miles southeast of Nome. There is an Indian school located at this place where several school teachers are employed under the Bureau of Education.

It is estimated that it will take at least 18 months to make this study, at the end of which time the members of the group will probably return to Washington for the purpose of working up their report.

While the Branch of Grazing hates mightily to lose any of its trained young men, nevertheless we feel that here is an opportunity that should be offered them to get into something which promises much for the future. The salary is, of course, quite an increase over anything we can offer at the present time, and if the man who takes the job makes good he will come back with information in his head and in his report which will make him a leader in this particular line of industry. If there is anything at all in the future of the reindeer in Alaska, and the friends of the industry believe there is, this man can easily command his own salary as a reindeer expert. The job calls for a red-blooded, ambitious young man not afraid of hard work, willing to meet the privations of life in Alaska, and with a desire to make good.

While it is no particular place to take a wife, nevertheless it is my understanding that if a wife must be taken into consideration she would find at Unalakleet reasonable companionship among the teachers from the United States who are employed in the school at that point.

The matter has been put up to the District Foresters with a view to giving any of the men who feel themselves capable of filling this position an opportunity to be considered. We feel enough interest in the plan to give up a good man for the work. Prompt action is required because the Biological Survey desires to start this investigation as soon after July 1 as it is possible. Slowly then, don't crowd, boys!

WILL C. BARNES.

Ingenuity vs. Hard Times

Management or Money! Which shall it be? Does any one still contend that money can not be used in place of management or that (within limits) management can not take the place of money? If there is still any skeptic on the interchangeability of these two forces he should give attention to the adventures of District 5 and District 2 in recreation development work. Two years ago it looked as though the construction of recreational improvements and educational work on recreational use would all have to stop because there was no money available for improvement of camp grounds and construction of other recreational facilities. Since that time District 2 has found a way to get some $40,000 worth of work done without cost to the Service. It all started with the efforts of a Supervisor to get adjacent communities interested in recreational use. The movement grew until corporations for development of recreational areas were organized and stock sold to members of interested communities. Counties and municipalities began making appropriations to develop areas in which they were particularly interested.

Within a year, as reported in the last Bulletin, District 5 has secured some $23,000 worth of work by developing the same lead. Twelve counties, municipalities, Chambers of Commerce and other associations have been interested to date, and more support is confidently expected.

This method of getting out of the hole we were in a year or two ago has a number of gratifying features. One of the best points about it is that the communities which contribute financially to the development of their camp grounds will undoubtedly take a keener interest in recreational use and give more support to the program for such use of the Forests than if they had not participated in the financial burden of the movement. ROY HEADLEY

It is Finished! Hallelujah!

As the Bulletin goes to press word comes that the report on the Capper Resolution has been signed, sealed and delivered. Everybody concerned with it has heaved a long breath of relief and gone off for a week's sleep. It is expected that the letter from the Secretary accompanying the report will be made public before the Bulletin appears and that the suspense of the Nation, which has been waiting breathlessly for the results of the investigations to be announced, will be relieved.

Seriously, though, the Capper Report was a tremendous undertaking that has been handled in a most creditable fashion. The results which were accomplished in the limited time available were unusually good. The report contains the desired information and may well furnish the basis for action by Congress on the adoption of a national policy of forestry.

Mr. Clapp, and the men under him who have handled the work, can well afford to be proud of their accomplishment. It was due to the spirit of the Forest Service that the report was finished on time. Any organization less enthusiastic about its work, less quick to perceive the opportunity offered by the report, or less efficient in getting all of its agencies on the job immediately would never have gotten the report through on time.

It is some report all right, and here's hoping that the best use will be made of it.

Junk from the War Department

Many Forest officers have been anxious to get one of those fine trucks that the War Department has available for transfer. As evidence that all is not gold that glitters, read what District 3 has to say:

> "This truck is very old and dilapidated, and requires considerable repair before it can be used. As received, the truck is useless. The horn is missing, but if it had one and we could run another Ford under it, we would have a good car. The front axles are bent, clutch won't work, steering gear works fine for circle driving, the engine supports are broken, the connecting rod to brake is broken and the engine requires complete overhauling. It is a good Henry considering the shape it is in."

How About It?

The following is taken from a letter recently written by an ex-Service ranger who was considered one of the best men in the District where he was employed:

> "It appears that in some of the local ranger districts the local rangers are very inactive and that they spend a greater part of their time at their headquarters and do not take the interest that they should. While I readily realize that at the present time there is a great deal more report and office work than in the past, I still feel that there should be more pep and activity shown by many of them in grazing and timber sale administration, in cooperating and assisting, especially in grazing. Local users often compalin to me that there is a lack of interest shown by the rangers; that they are unable to get them out without giving them from ten days to two weeks notice. Users complain that rangers do not keep in touch with conditions of the range or the distribution of the stock during grazing season."

In the old days when opposition was rife this man made a record for handling the work in such ways as to satisfy permittees of the advantages of forest administration. If his statements are true, they amount to a charge that can not be overlooked. Is there anything to them? If so, why? Is too much paper work being called for from rangers? Is there too much fixed scheduling of work which prevents meeting needs promptly as they arise? Is it because there is more work to be done and therefore scheduling and ordering is necessary even if individual wants can not be always met promptly, or if none of these are the reasons, what is the trouble?

Starting the Fireworks

What may prove to be the first big gun in an active campaign for the adoption of a National Forest policy was fired on May 20 when Senator Capper introduced "a bill to prevent the devastation of forest lands, to perpetuate the forest resources of the United States, to avert the destruction of lumber and wood-using industries, and for other purposes." Although it is doubtful whether the bill will be acted upon at this session of Congress, its introduction will bring the matter of a forest policy before the nation as a whole and may pave the way for action by Congress.

In general, the bill follows rather closely the recommendations contained in the report of the Pinchot Committee of the Society of American Foresters. A Federal Forest Commission consisting of the Secretaries of Agriculture and Labor and the Chairman of the Federal Trade Commission is created. The Secretary of Agriculture is designated as Chairman of the Commission and it is specified that the Forest Service shall carry out the regulations authorized in the bill.

The Federal Forest Commission is authorized and empowered to prevent forest devastation and to promulgate regulations governing the harvesting of forest products from commercial forest lands "so that forest crops everywhere shall be harvested in a manner suited to the peculiarities of a forest growth with the least cost consistent with preventing forest devastation." For this purpose the sum of $2,000,000 is provided. Farm woodlands and "any commercial forest lands which" in the judgment of the commission "may be exempted with safety to the public interest" are excluded from the application of the bill.

Provision is made also that when the commission has reason to believe that owners or operators of commercial forest lands in any organized forest unit are preventing forest devastation, it shall withdraw its supervisory control of such units. The term "organized forest unit" is interpreted to mean an area of privately owned land of such size and character and so managed as to be operated and protected from continuous yield of forest products.

Cooperation with the various States for the prevention and suppressio of forest fires under conditions similar to those of the present Weeks law is authorized and the sum of $1,000,000 provided. The bill gives the Federal Forest Commission the authority to require persons engaged in forest industries to adopt uniform accounting systems, to make periodical reports on production, orders, sales, etc., on costs of production, and measures to prevent forest devastation, and on such other matters relating to forest industries, as the commission shall decide are in the public interest. Authority is granted to allow and control the combination of persons engaged in forest industries in commerce "for all purposes resulting in economies of production, manufacture, and marketing whenever such combination shall be in the public interest."

Investigations into the condition of the timbered and cut-over forest lands of the United States, and a report within three years time as to what lands should be publicly owned and recommendation for a program of acquisition, etc., by the purchase of fee, or of surface rights by long-time leases, by condemnation after the harvesting of forest crops, or by issuance of certificates to cut and remove National Forest timber, are called for. The sum of $500,000 is provided to cover the expense of this work and of an investigation into the loss of local taxation on account of transfer of forest lands to the United States.

The Commission is authorized to consult with district, regional, and national boards of employees and employers of forest industries formed for the conciliation and adjustment of differences arising between employers and employees.

The bill provides that if the Commission shall deem it to the public interest the Forest Service shall undertake such logging, milling and other operations as may be necessary to harvest and market the products of National Forests. For this purpose it is proposed to set up a revolving fund up to but never in excess of $500,000.

A fine not exceeding $5,000 a year or imprisonment for not more than one year or both are specified as penalties for any person cutting or removing forest products from commercial forest lands in violation of the proposed act, or of the regulations and orders of the Federal Forest Commission. It is provided that such person shall in addition to all other taxes be subject to a tax of ten per cent of that portion of his annual net income derived from forest products shipped or disposed of in commerce.

Another Testimonial for the G.E.M.R.A.

Mr. C. H. Squire,
Secretary, Government Employees
Mutual Relief Association.

My dear Mr. Squire:

I wish to thank you and the association for the careful consideration and prompt payment of my claim resulting from my sickness.

We serenely live our lives in health and happiness, little thinking of t constant danger lurking near, until all of a sudden, like a bolt of lightning, "some little bug" makes his appearance and plays havoc with our systems. Since i surance against the drain on the pocketbook incident to sickness can be secured the insignificant sum charged by the Association, everyone eligible should avail himself of the opportunity.

Very sincerely yours,
W. R. CHAPLINE,
Grazing Examiner.

Nuff sed. Better join up.

Reserved Lands Threatened.

The retention of much of the 80,000 acres of heavily timbered and other areas in the six restricted States now reserved from entry by Presidential Proclamation pending legislation for their addition to National Forests has been threatened by a recent ruling of the Department of the Interior. Alexander C. Shaw, an attorney of Portland, Oregon, has secured a reversal of the action previously taken in rejecting his application to file soldiers' land scrip on 40 acres of heavy timber near the Santiam National Forest. This was one of the old Linn and Lane timber claims, whose patents were canceled by the Federal Courts for fraud, and which were then withdrawn by the President pending legislation for thei inclusion in a National Forest.

The recent decision of the Department of the Interior in reversing previo decisions on this matter was to the effect that the Presidential Proclamation wa operative only during the session of Congress following its issue, and upon the journment of that Congress the Presidential withdrawal automatically ended and th land was open for entry under the land laws. Mr. Shaw's filings, which were rejected by the General Land Office, were ordered reinstated and the Commissioner o the Land Office was directed to issue patent.

Reserved Lands Threatened (Continued)

The Solicitor of the Department of Agriculture has expressed the belief that the action of the Secretary of the Interior could not be sustained by the law of 1910 on withdrawals, which specifies that withdrawals once made by the President can not be revoked except by act of the President or of Congress. Steps are being taken not only to protest against the action of the Secretary of the Interior, but also to bring suit through the Department of Justice for the cancellation of any patents which may be issued pursuant to this decision.

The withdrawal in question, all of which would be patented if this decision holds, covers 3, 360 acres of timberland averaging about 67,000 board feet to the acre, patents to which were canceled a number of years ago.

It Pays to Advertise

Some time in March the Bulletin contained a little item to the effect that District 7 was looking for a man to assist the Supervisor of the Wichita National Forest and Game Preserve. The Bulletin evidently has a wide circulation for immediately the District Forester began to get answers to the appeal. Out of the applications received, Forest Ranger Guy C. Wallace of the Leadville Forest has been selected and will soon take up his new duties on the Wichita.

Mr. Wallace is a Virginia boy, raised on a farm where, in addition to other activities, he helped around his father's portable sawmill. Later on he drifted West, and after tackling several different kinds of work, got a job with the Bureau of Fisheries as a fish culturist, in which capacity he was employed for about two and one-half years in Colorado. He comes to his new job with a favorable report from everybody under whom he has worked, including the men in the Bureau of Fisheries.

With Mr. Wallace's help Supervisor Rush can now put into effect some of his long-cherished plans. From now on the buffalo, deer, elk, turkeys, skunks, and other wild things on the Wichita will find themselves card-indexed, pedigreed, numbered, tagged, and described in the records of that Forest in the most up-to-date and approved fashion.

The Elk Pull Through

Last winter when the cold weather set in so unusually early the first reports that were received indicated that the big herds of elk throughout the Northwest were doomed. But while the winter was by no means an ideal one, nevertheless the game animals came through in much better shape than we had reason to anticipate up to about April 15.

Between April 15 and May 1, however, the storm which swept over the whole West from northern Arizona to the Canadian border caused serious losses of livestock, and it was only to be supposed that the game suffered quite as much.

The Forester has been endeavoring to learn the present condition of the three large herds of elk in which we are most deeply interested - the Sun River herd in the Lewis and Clark Forest in Montana, the Jackson Hole herd in Wyoming, and the Yellowstone Park herd which grazes in both Montana and Wyoming between the National Park and the Absaroka and Gallatin Forests.

The Sun River herd which, according to the count made about a year ago, consisted of approximately 2,500 head, went through the winter in splendid shape. Deputy Supervisor Rush of the Lewis and Clark Forest made a snowshoe trip all over the Sun River Game Preserve in the latter part* of April, and found that out of a total of 486 head of elk actually counted, only was found dead from starvation, and another had apparently been killed by bear. The mountain sheep and deer which were noticed on the same trip were doing fine.

In the Jackson Hole country, where we were sure heavy losses would result, the Biological Survey on May 20 advised the Forester that between 600 and 700 head of elk, mostly last year's calves, had died on the feeding grounds in Jackson Hole during the past winter, out of more than 8,000 head which came to the valley for feeding. This is approximately a 10 per cent loss, which, everything considered, is certainly not excessive. Representatives of the Biological Survey and the rangers on the Teton are now endeavoring to get a line on the number which died back in the hills during the same period. It is roughly estimated that the Jackson Hole herd contains between 16,000 and 18,000 head of elk, in which case, if the losses have been no heavier in the other part of the herd than in this part that came to the feeding grounds, they have by no means been so serious as was expected.

*one

The Elk Pull Through (Continued)

In the Yellowstone herd which, according to the last count, consisted of about 20,000 head, the loss from starvation up to April 15 was approximately 1500 head. There were also approximately 4000 head killed by hunters last fall. This reduced the herd but should not really be called a loss as it is our understanding that 90 per cent of the animals were secured for food purposes and therefore were fully utilized.. We have had no report from the Yellowstone Park herd since April 15, but inasmuch as the storm which later swept over the country was especially damaging to the livestock interests in Montana and Wyoming, there were undoubtedly additional losses among the Yellowstone elk. The Park Service is now endeavoring to get an estimate of the total losses. The Jackson Hole herd was fed about 2000 tons of hay during the winter. About 600 tons of this amount cost as high as $65 a ton. The Yellowstone Park herd was fed about 2000 tons, which cost from $25 to $40 a ton.

Taking everything into consideration and realizing that many of the Montana and Wyoming stockmen had tremendous losses in spite of all the hay and other feed furnished the stock, it seems as if the efforts made by the Government to save the elk herds were very satisfactorily carried out and the losses not more than would have occurred had the same number of domestic animals been on the range..

It is notable that in both the Jackson Hole and the Yellowstone herds, the losses were mainly among last year's calves, which naturally succomed more easily to the privations of the hard winter than did the much older and stronger animals.

WILL C. BARNES.

Washington Notes

W. R. Chapline has been appointed Inspector of Grazing in charge of grazing investigations to succeed Jas. T. Jardine.

C. L. Forsling, formerly in charge of the Jornada Range Reserve, will take up the work in the studies branch in the Washington office.

Acquisition

Probably one of the most exceptional counties in the United States fr the standpoint of development is Graham County, North Carolina, in which are loc the Olmsted lands now under Forest Service administration. The county is in the heart of the Southern Appalachine Mountains and borders on the State of Tennessee It has an area of 302 square miles. and a voting population of about 500 which, o the generally accepted basis of five to one would make the total population about 2500 souls. The county seat is Robbinsville, which has a population of about 150. There are practically no agricultural lands within the county, which accounts for its very small population. The most unique thing about the county is that it does not have a railroad, telegraph, or telephone line within its borders. Several attempts have been made to maintain a telephone line from the county seat to the nearest railroad point, but it is stated that both failed because of the prejudice of some of the local people which culminated in the destruction of the line; there is one post office - in the county seat - and one rural route. This is all that Uncl Sam has succeeded in doing to bring some of the benefits of civilization to this region. The county is, however, extremely rich in natural resources. There are untold millions of feet of timber which has hardly been touched. As is the case throughout the Southern Appalachians, hardwoods predominate, and it is generally conceded that the county contains the finest hardwood remaining in the United States. The forest soil is extremely fertile and timber growth is, as a consequence rapid. While fires occur annually none have been devastating. This is probably du to the fact that there are no large operations which ordinarily are the causes of forest fires.

The waters of this county drain into the Little Tennessee River and ther are many streams which promise large opportunities for hydro-electric power development within its borders. In fact, extensive surveys looking to the development of this potential water power have already been made, and it is only reasonable to suppose that a great while will not elapse before it is utilized.

A pretty demonstration of the influence which forest cover exerts on soil protection is instanced in the case of the watershed of Snowbird Creek. Some of the forest cover has been removed from the watershed of "Little Snowbird" and hillside farming has been practiced to a limited extent. On the other fork of the creek the timber has been undisturbed. During rainy spells the water from Little Snowbird is muddy, while from the other fork the water is clear. There is a distinct demarcation between the two for a long distance after their confluence.

District 2 - Rocky Mountain District

The following article was copied from the "Herald", published at Ouray, Colorado, May 14, 1920:

> "The organization committee of the Ouray Recreation Association met at the law offices of E. E. Wheeler, perfected temporary organization, designated a board of directors composed of Messrs. Whinnerah, Wheeler, Boyd, Henn, T. J. Watkins, Canavan, Christopher, Roderick, MacLennan and Schneider, and forwarded the articles of incorporation to the Secretary of State for a charter.
>
> "This association is organized for the purpose of cooperating with the U. S. Forest Service in promoting the recreational features of the latter's work, and will derive local benefit in proportion to the efforts put forth locally. As soon as the charter is received, membership in the organization will be solocited and the number of members should reach at least 200 if the people take the proper interest.
>
> "Yes it will require money to assist in the work if we are to derive the maximum benefits, and its importance justifies putting forth our best efforts."

Planting has been in progress on the Pike Forest since the latter part of March. The first operation consisted in planting about 100 acres to yellow pine in Waldo Canyon, about two miles from Manitou, the crew living at Manitou during this work. About the middle of April, a camp was established on Crystal Creek at an elevation of about 9,000 feet to plant Douglas fir and Engelmann spruce. Frequent snowstorms have delayed the work and the planting will probably not be completed until the middle of June. No trouble has been experienced in securing men and quite a number have been induced to stay by the offer of a 50¢ per day bonus to those who remain until the close of the job. The wages being paid are $2.25 and $2.75 per day and board, the latter rate applying to those who finish the job.

The Forest Service has played a very active part in the publicity work leading to the observance of Forest Protection Week, May 23 to 29. A committee composed of representatives from the Civic and Commercial Association, the Colorado Mountain Club, and the District office handled the details of the work and was backed by the able cooperation of all surpervisors and rangers in the Rocky Mountain States. The week was proclaimed by the Governors of Colorado and Wyoming and every effort made, through the medium of publicity, to secure the cooperation of all citizens in its observance.

The Colorado committee had special embossed letterheads and envelopes, which carried a snappy form letter requesting cooperation in this movement, to stock associations, motor companies, ministers, commercial bodies, county agents, lodges, principals and superintendents of schools, and newspapers - a mailing list of approximately 1,000 names. Two large posters 4 x 6 feet were painted and hung on the gateways to the Golden and the Morrison entrances to the Denver Mountain Parks; approximately 1,000 lithographed posters were distributed in Denver and the principal towns throughout the State. A hundred colored lantern slides were sent to the leading movie houses in Colorado, Wyoming, and South Dakota. Colored enlargements and hand-painted posters were distributed to leading department stores in Denver for window display. Seven articles on the damage wrought by forest fires, and other related subjects, were prepared and more than 10,000 copies distributed; this item alone requireda week's work and the mimeographing of over 30,000 sheets of paper. Forest Protection articles were run on Sunday, May 23, in the Denver dailies; and a special cartoon on Protection Week appeared in the "Denver Post."

Reports appearing in the daily papers indicate that the week will be generally observed throughout the States of Colorado and Wyoming, and that through this movement the attention of the public will be focused on the importance of protecting our forests.

District 3 - Southwestern District

Pictures of fires in the forests of the Southwest seem to be a scarce commodity. Don't replace a rake or shovel in your outfit with a camera when that next call comes over the wires, but try to carry the camera in addition. Good use can be made of pictures of this subject.

(This applies to all the Districts. Can't we get some real fine pictures this summer? Ed.)

Born to Ranger and Mrs. Woods, of the Lincoln, a son.

"Dr. Edgar L. Hewett, Director of the School of American Research, left Santa Fe on May 11 for the Rito de los Frijoles to institute work upon the restoration of some of the ruins at that point. The Sun House, directly at the foot of the entrance trail, has been selected for restoration. A portion of the funds for the work have been contributed by the Forest Service and by June 30 we may expect to see the restoration of a complete unit of one of these prehistoric structures with the typical furnishings back in place."

"Mr. Walter E. Murk, who for some weeks past has been engaged in clerical work in this office and at the sign shop, has been assigned as Custodian to the Rito de los Frijoles to fill a place made vacant by the resignation of Don S. Sullivan, which becomes effective May 15.

- Santa Fe

Forest Policy committees representing all lumbermen's and timber owners' organizations on the Pacific Coast met recently to formulate a program and declaration of principles in connection with a national as well as western forest policy. Reforestation to insure future crops was the central aim of a progressive series of policies formulated covering local and national questions. The lumberman's responsibility as an individual and private timberland owner was not overlooked. One point promulgated was that the Forest Service should be the recognized leader of public forestry thought and effort.

"On May 2, Ranger Plomteaux reported the detection of several Santa Clara Indians in the act of shooting ducks on the Rio Grande near Espanola. A copy of his report was forwarded to the District Forester, who in return referred the case to a Mr. Britton, United States Game Warden. Mr. Britton investigated the case at Espanola on May 11, and it is reported that the offenders have been taken in hand for punishment by the Indian Agent at Espanola."

- Santa Fe

"It is understood that the department of Indian Affairs have consummated a sale for 170,000,000 feet of timber lying in the Elk and Silver Spring Canyon drainages, Mescalero-Apache Indian Reservation. Longwell and Pate were the successful bidders."

- Lincoln

District 4 - Intermountain District

Mr. Kneipp recently made a trip over the eastern portion of the Ashley Forest in company with Mr. Thomas G. Shearman of the Secretary's office and Mr. Volney T. Hoggatt, editor of the Great Divide of Denver. The purpose of the trip was to determine the truth of Mr. Hoggatt's statement that the east half of the Ashley Forest was timberless, treeless, and suitable for agricultural purposes. Before the completion of the trip Mr. Hoggatt was satisfied that the statement was incorrect with regard to the land which he saw excepting two tracts, one known as McKee Draw, a high mountain meadow with an elevation of approximately 8,400 feet, and containing about 3,000 acres of land; and a tract of sagebrush land of about 13,000 acres in the extreme southeastern corner of the Forest which was left in at the time the land classification was made, because of a lack of demand for homestead purposes and the certainty that the area, if removed, would be heavily overgrazed by sheep to the detriment of a large number of small cattle permittees who now occupy it. Comparisons were made between conditions on the ground and conditions as shown by the land classification report which was found to be very accurate as to types. Mr. Shearman seemed inclined to the view that the sagebrush land might possibly be eliminated, but that the listing of the high mountain meadows or their elimination would not be to the public interest. However, he did not express himself definitely on the point.

"Everyone in our family is some kind of animal," said Jimmie to the amazed preacher.

"Why, you shouldn't say that!" the good man exclaimed.

"Well," said Jimmie, "mother's a dear, the baby is mother's little lamb, I'm a kid, and dad's the goat."

Mrs. Robt. E. Miller, wife of former Supervisor Miller of the Teton, whom many of you know, was recently elected mayor of Jackson. She is to be assisted in the administration of the city by four council-women. Supervisor McCain says "we anticipatedthe change in administration and cleaned the yard, washed the windows and blacked the stove. Jackson is claiming the distinction of being the only wild and woolly "metropolis" of an "outlaw"-infested region absolutely ruled by the gentler sex."

The most intensive and concentrated educational campaign ever undertaken in the District Office - that in connection with the observance of "Forest Protection and Fire Prevention Week" - has closed. And everybody, from the District Forester to Messenger Boy, has drawn big breaths of relief. It was some strenuous while it lasted, as the following figures indicate:

Work started	May 10
" completed and mailed	May 20
Elapsed time	11 days

Number of people on mailing lists:		
(a) outside Service	3330	
(b) Forest Service	300	
(c) Total	3630	3630

Number of pieces sent out:		
(a) to newspapers	6500	
(b) to Forest Service	300	
(c) to others	14100	
(d) Total	20900	20900

Cash cost to Service (not including salaries to regular force, material from stock, cost of posters that were ordered for regular distribution)	$46.00

Present indications are that the campaign was backed up in fine shape by the field force and that through the combined efforts of the State Board of Forestry and the Forest Service, with cooperation all along the line, "Forest Protection and Fire Prevention Week" went big all over the State.

Many Forest officers will remember the flurry last fall when a sleek little dwarf named Karl Brandenburg put over the friendly endorsement for a "fellow Forest officer" of a $50 worthless check on the chief clerk of the Santa Barbara by means of a stolen badge, pseudo credentials from a "chief ranger" and glib talk about other "bosom friends" in the Service; and followed this up by very successful fast moving raids on business concerns in Oakland, Sacramento, Seattle, and Tacoma. Word has just been received from Ketchikan, Alaska, that both Brandenburg and his partner have been indicted by the Federal grand jury there on three counts:

1. Obtaining money on false pretenses.
2. Impersonating a Federal officer.
3. The Mann Act.

Who says the arm of Forest Service justice isn't attaining quite a respectable length?

District 5 - California District

Besides the Brandenburg case before the Alaska Grand Jury the following Federal Grand Jury indictments and convictions have recently been secured in this State: At Los Angeles, M. B. Jackson, Habson Jackson and Chester S. Frye, April 2, all for an incendiary fire near Santa Margarita on the Santa Barbara Forest, October 12, 1919. On May 19 the Jacksons plead guilty before Judge Trippett at Los Angeles and were fined, N. M. Jackson $350 and Habson Jackson, $150. Frye was dismissed, which we had expected, as he was only indirectly concerned with the fire.

At Sacramento, Thos. B. Coumbs and Jack French (known as Yellow Jacket) were indicted on May 2, for incendiary fires on the Trinity, October 18, 1919, and February 24, 1920, respectively. Coumbs plead guilty at Sacramento, May 10, and was fined $150 or 30 days in the Shasta County jail. He paid the fine. Yellow Jacket has not yet been brought in. Joe Dazevedo, Jr., for incendiary fire on the Lassen October 18, 1919, indicted by Grand Jury April 27. Some dozen local cases have already come in from the Forests this season, which will be reported in detail about June 1.

District 6 - North Pacific District

The Slogan Contest feature of the forest preservation campaign now being waged resulted in securing the following slogans to be used during Forest Protection Week, for which prizes were awarded as indicated:-

Lumber, fuel, beauty, joy,
Forests furnish, fires destroy. (First prize, $25)

Everybody's scenery and timber;
Save yours from fire. (Second prize, $20).

Our forests for utilization,
Recreation - not devastation. (Third prize, $15)

No forests - no wealth,
No trees - no health. (Fourth prize, $10)

God created magnificent forests;
Fools kindle destructive fires. ($5)

Forest and scenery pay,
Keep the fires away. ($5)

Forest stately, forest tall,
Lighted match spoils all. ($5)

Beautiful forest, evergreen,
Through smoke is never seen. ($5)

Running brook, cooling breeze,
Fire brand, ghostly trees. ($5)

Forest monarchs, stately, bold;
Fool, Fire,- Story told. ($5)

Action is contemplated against a lumber company to recover $350.46 damage to National Forest timber caused by a fire that spread from private land, where it had been allowed to burn in belief that the land was National Forest land; and $3,566.32, expense incurred in extinguishing it. Authority for such action is given by an Oregon statute which reads: "Any fire on any forest land in the State of Oregon burning uncontrolled and without proper precaution being taken to prevent its spread is hereby declared a public nuisance by reason of its menace to life or property. Any person, firm, or corporation responsible for either the starting or the existence of such fire is hereby required to make a reasonable effort to control or extinguish it immediately." The fire in question originated in an old burn and is believed to have been started by berry pickers. The manager of the lumber company concerned used his resources to protect company buildings and equipment rather than in suppression of the fire, which was put out by the Forest Service, but not until it had burned National Forest timber. The action is said to be the first of its kind attempted in Oregon.

A form of agreement has been suggested to the game warden of Skamania County, Washington, by Supervisor Brundage, whereby fish fry for stocking the streams of the Columbia Forest will be propagated at the county hatchery. The Bureau of Fisheries will be asked to furnish one-half million eggs, preferably of steelheads and rainbows. In winter the hatchery propagates about 50 per cent of the eggs; in summer, from 85 to 90 per cent. Its capacity is one million salmon eggs or one and a half million trout eggs.

District 6 - North Pacific District (Continued)

At a recent meeting of the board of directors of the Loyal Legion of Loggers and Lumbermen, the sanitation officer reported that double bunks and "muzzle-loaders" are disappearing from camps that have agreed to conform to standards of logging camp life recommended by the Legion. Double-deck bunks remain in only 13 per cent of the camps. Sixty per cent of the camps under the influence of the Legion report single bunks, 35 per cent with bedding, and 32 per cent with none. In 65 per cent of the Legion camps blankets and a weekly change of linen are furnished at nominal charge. The "Four L's", although organized as a war-time activity, has become a permanent organization. Several of the District Forester's staff belong.

Sunday, May 16, the Forest Service and "Mazamas," the well-known organization of mountain-climbers, cooperated in building a trail from Columbia River Highway up Tanner Creek to its falls. The District Forester has received a letter from the Mazamas thanking the Forest Service for its help, and intimating that cooperation will be sought again later in the season in constructing a trail from the Highway to McCord Falls. Forest Examiner H. L. Plumb supervised the Tanner Creek construction, done by about 75 Mazamas with tools and equipment loaned from Forest Service stock. All of the construction is on the Oregon Forest. The Mazamas have for one of their purposes "to encourage and preserve the forests in their natural beauty."

The 1919 shingle cut for Oregon and Washington is estimated at 6½ million shingles, mainly western red cedar, with some Douglas fir. All states are represented in the distribution.

This District intends sending western red cedar to the Madison Laboratory to have its pulpwood possibilities determined. It is hoped that a suitable basis for wrapping- and other kraft papers may be derived from it, thus releasing white woods now used of necessity for wrapping paper to their higher uses in newspaper, stationery, etc.

Burning of slashings required under the Oregon law has been going on during May to avoid such burning later when the timber will be more inflammable. Also a special effort is being made to do as much slash burning as possible early this year, so that the scenery may not be obscured when the Shriners are here in June.

The O.-W.R.R. & N. Co. has signed an agreement to maintain a speeder patrol throughout the fire season that will safeguard the timber and scenic resources of the Columbia River Gorge and that portion of the Wenaha Forest into which its road extends. This patrol will greatly lessen the danger of fires which start in dry grass from sparks and burn undiscovered until they spread into timber. The Columbia River Gorge has never had protection of this sort before, although a fire along the right-of-way there would be most serious.

On May 14, a spark from a donkey engine kindled a fire on the sale area of the Oregon Lumber Company, Oregon Forest, on a section from which brush had recently been burned. The fire spread to an unburned area, and the high wind carried it thence to the portable cabin of a scaler. The cabin, together with about $200 worth of Government supplies and equipment and considerable personal property was destroyed.

District 7 - Eastern District

A few days ago Forest Guard J. W. Hodge, the lookout stationed on Hankey Mountain on the Shenandoah discovered, only a short distance from his tower, three bears which had wandered up to the top of the mountain and were feeding within a stone's throw of him.

Hodge had inadvertently omitted the formality of attaching his gun to his person that day, so the bea[illegible]nd him hors de combat and enjoyed the forage unmolested for several hours. [illegible] called up District Ranger Shanklin to report the trespass and requested per[illegible]sion to leave his lookout long enough to get his gun. Owin[illegible] the adverse weather conditions, it was considered bad form to leave the stat[illegible]nned, and Hodge had no alternative but to stick to his post and hope the [illegible]re not hungry. Other lookouts listening in on the conversation became highly interested, and offers of aid and assistance came thick and fast for several minutes.

District 7 - Eastern District (Continued)

A few days later three cubs were captured by some bark peelers on another district of the Forest. The cubs were seen coming down to the stream above which the men were working, presumably for a drink. Upon looking around and seeing no old bear with them they decided to try to get them alive, which they succeeded in doing after a lively chase, and a pretty severe scuffle. The cubs were sold next day to a hotel man for $20 apiece.

The Shenandoah Stockmen's Association, which is a majority association, and includes within its jurisdiction the northern half of the Shenandoah Division of the Forest, has just begun its second grazing season as an association.

The principal reason for organizing was to secure a better grade of stock on the range by the introduction of purebred sires. Last year the association purchased outright a number of such animals, but owing to difficulties of wintering and securing the proper attention for them during the winter season, it was decided that the same results could be obtained by reimbursing private owners for the use of their animals on the range, and that a sufficient number could be secured in this way to meet the requirements.

At the time the association was organized the plan just adopted was considered, but it was decided inadvisable to try it because of the scarcity of purebred stock in the country. Several stockmen who have purchased or are contemplating purchasing purebred sires for range use now claim that a number of good ones are available. This indicates what results a year's agitation for purebred stock will produce.

The Shenandoah Stockmen's Association, by placing itself on record as favoring the purebred idea has done a great service in the Valley of Virginia, and within a comparatively few years will no doubt have added thousands of dollars to the value of its output from the Shendoah Forest.

Percy J. Paxton, formerly of District 2, has been appointed Collaborator on the Shenandoah National Forest, Mr. Paxton having accepted the position of forester in charge of a 60,000-acre timber tract owned by a Pensylvania Company for the Insurance of Lives and Granting Annuities, located in Rockingham County, Va., and Pendleton County, West Virginia.

Mr. Paxton will cooperate along protective lines with the officers of the Shenandoah National Forest, which joins this tract on its southern boundary.

The officers of the Shenandoah were very glad to see this tract put under administration as, heretofore, it has been flying loose in the wind and has beeb a distinct fire menace to the National Forest.

Forest Ranger Shanklin, employed on the Shenandoah Forest as a ranger for the past four years, has been transferred to the Nantahala as Deputy Forest Supervisor. Forest officers on the Shenandoah regret the loss of Ranger Shanklin, but the best wishes of the whole force follow him to his new position.

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

June 7, 1920

Death of Eugene S. Bruce

As reproducing the Bulletin begins, word comes of the death this morning (Monday, June 7) of Eugene S. Bruce, formerly of the Forest Service, at his residence in Washington.

Comment on the important part he took as expert lumberman in the upbuilding of our timbersale policies and procedure, as well as any attempt to express what should be said of the man himself, must be left for the next issue of the Bulletin. His long connection with the Service began in 1900 and was terminated only when illness compelled him to withdraw, late in 1915. His duties made him widely known to the field force, while his natural strength and fineness of character won him the respect and friendship of his associates to an extraordinary degree. His death comes at the end of a long fight against disease, waged always with boundless courage and a spirit almost invincible. There have been very few men in the Service whose loss would be so widely and deeply mourned.

A Temporary Setback in Forest Investigations

The Agricultural Appropriation Bill, as finally passed by Congress and approved by the President, carries an appropriation of only $50,000 in the Silvical Investigations schedule. This is a reduction of $28,728 from the normal appropriation for the past six or eight years and a reduction of $53,728 from the schedule as originally passed by the Senate. The cut constitutes a serious blow to the effective prosecution of one of the major Forest Service activities. It is particularly unfortunate that it should have come just at a time when the work in forest investigations should be materially expanded, not only as a necessary step toward the more effective management of the National Forests, but in connection with the campaign for the better handling of the privately-owned forest lands of the country. As a basis for the intelligent application of any nation-wide forest policy, far more information than we now possess is needed as to the best methods of forest management, and this information can be obtained only by carefully planned, systematic, and continuous investigations.

While the decrease in appropriation necessitates a considerable curtailment in the forest investigative work, I have felt that every effort should be made to avoid the separation from the Service of the men who have been engaged in this work. These men have devoted years of faithful effort, often at considerable sacrifice, to the interests of the Service. It is only fair that the Service in its turn should do all in its power in such a situation as the present to safeguard their interests. Arrangements are accordingly being made for the transfer to other activities of those men previously engaged in investigative work who can not be continued on it with the funds now available. It is fully realized and deeply regretted that even this will work more or less hardship on them, both because of the sudden break in their official work and because of the interference with their personal and family arrangements. The difficulties imposed on those who will continue the work with inadequate funds and assistance are also appreciated and regretted, as are the burdens imposed on administrative officers in rearranging their plans to meet the changes necessitated by the disruption of the investigative work. From every standpoint it is merely a case of making the best of a bad situation.

Every effort will of course be made not only to regain lost ground but to secure increased appropriations for another year. It is my hope that it will be possible in the near future to obtain appropriations sufficient to make possible the maintenance of forest experiment stations in all the principal forested regions in the United States, the conduct of additional studies of a general nature, and the maintenance of the closest cooperation between the investigative and the administrative force. In my judgment the present setback is a purely temporary one, and from now on we shall be able to make steady progress toward this goal. In the meantime, during the lean year that is to come, I hope that administrative and investigative officers alike will bear with patience the difficulties under which they will unavoidably labor, and will avoid discouragement by looking forward to better days to come.

W.B.GREELEY
Forester.

What Constitutes a Long Report?

There has always been an inclination on the part of Government officers of all kinds to frown down what is usually designated as "long official reports." The question at once arises as to what constitutes a long report.

A keen observer once said there are two kinds of public speakers -- first, those who have something to say, and, second, those who have to say something. I think all of us can readily bring to mind illuminating examples of such public speakers. Carrying the comparison to reports we have exactly the same situation. There are forest officers who have something to report and there are forest officers who have to report something.

During the war the Branch of Grazing in an honest endeavor to relieve supervisors from the burden of official correspondence, due to the feeling that clerks were scarce and stenographers hard to secure, assented to a plan proposed by several of the Districts to the effect that the annual grazing reports need not follow the prescribed plan and could be made as short as possible. The result of this brought us face to face with this proposition of having something to say or having to say something. Some of the supervisors who should have had something to say dodged the issue and sent in reports covering only two or three pages, most of which were used up with their expressions of joy over not having to file the full annual report. Others started in to proclaim their pleasure at being relieved of the burden of making a report and then proceeded to cover many pages, one I have in mind being 62 pages long, with a rambling, wandering discussion of grazing conditions on their Forests following neither the outline prescribed by the regulations nor any other outline visible to the naked eye.

Once upon a time one of our would-be grazing men undertook to map out the steps taken by a grazing steer during one day, in order to show the amount of work the animal did in quest of his daily rations and the ground cover trampled out by his feet. The map which this investigator produced was one of the most remarkable pieces of work this office has ever seen. The animal on that day was evidently filled with a wanderlust which could only be satisfied by rather extensive travel and the investigator followed its every footstep and painstakingly platted it on his map. As a piece of detailed work it was a remarkable exhibit but its value was absolutely nil. It was the same way with some of these annual reports. They wandered all over the Forests involved, got into all sorts of out-of-the way corners, climbed the pinnacles, and all, to prove absolutely nothing. It was a case of having something to say with no well thought-out ideas of how to say it.

Summing up the whole situation I think it is axiomatic that no report from a supervisor who has something to report is likely to be too long. What the Washington office wants is information as to the conditions on each Forest put together in such a way that it can be readily understood by the man 2500 miles distant who is to read it and expressed in such language and with such logical order that it does not need* to make it intelligible.

I have in mind one supervisor on whose Forest there are some of the most pressing of our grazing problems. His was a long report. He evidently had something to say and went at it in a careful, systematic manner. The result was that he gave us a 50 page report, every individual page of which bristled with firstclass information, newsy and gossipy, and full of meat. With that report read we felt we knew that Forest from A to Izzard. Not long ago a western senator came to the office with an armful of complaints on matters on that Forest. In this report we found the answer to every statement made in these complaints and with it in our hands were able to convince the senator we knew something about what was going on the Forest and that the action taken by the Supervisor and the District Forester, and approved by this office, was based upon good, sound reasons.

One thing more. In the early days of the Service some of the Supervisors sent photographs which added much to the value and effectiveness of their annual grazing reports. Shaw of the Durango, now on the Absoraka, used to send each year a grazing report written so interestingly and illustrated so splendidly that it was handed round the Washington office for everybody to read and enjoy. Benedict on the Sierra also uses photos to excellent advantage. Often a picture visualizes a proposition better than many pages of descriptive matter. This is especially true of grazing affairs. We dont of course want under-exposed, half-baked photos, but if you have any new and good ones that will illustrate a point you want to make dont hesitate to attach them to your report. We are constantly needing photographs of grazing subjects to illustrate articles and there is a woeful lack of really good ones. Keep this point in mind this summer and see if you can't get a few negatives that will be worth while, not only in the report, but in the Washington collection.

WILL C. BARNES

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*a blue print

A "Fine Piece of Work"

The following letter needs no comment.

Mr. Earle H. Clapp
Assistant Forester,
Forest Service.

My dear Clapp:

I want to assure you of my deep appreciation of the admirable fashion in which the Branch of Research has handled the preparation of the report called for by the Capper Resolution. When this Resolution was passed by the United States Senate and plans for complying with it were considered, Colonel Graves anticipated that it would be possible simply to prepare a brief and general resume of the situation based largely upon information already available in the Forest Service. Not content with that, however, you have by strenuous efforts, drawing upon almost every available man in the Branch aside from help outside of Research, prepared a report which contains a great deal of new material and is an extremely fresh and valuable contribution to forestry economics in the United States. Your report is much better and much more complete than I had thought it possible to prepare in the limited time available. In certain respects it is one of the most valuable contributions which the Forest Service has made to the forestry movement in the United States; and the fact that such a report has been completed and delivered on time, in three months, is a splendid proof of the spirit and capacity to do things which pervades your organization.

I want to thank you personally for this fine piece of work and through you every man who has had a part in it.

Very sincerely yours,

W. B. GREELEY
Forester.

What's the Matter with Alaska?

Mr. Sherman who represented the interests of the Department of Agriculture on the special committee of inquiry appointed by Secretary Payne of the Interior Department, reports that a number of factors affecting the development of Alaska were brought out in the hearings of the committee at Seattle.

Some of the reasons for Alaska's loss in population are perfectly obvious. The Nome District has lost 90 per cent of its white population, due to the fact that the rich beach placers along the seacoast have been worked out, and at the present time most of the remaining work is being done by a few large dredges. It is reported that only about 800 people wintered in Nome last year. Correspondingly, the placers along the creeks tributary to Fairbanks are becoming more expensive to work, with the result that only about 1,000 people wintered in Fairbanks last year. The practical destruction of the great Treadwell mine by flooding from the sea breaking through the floor of Gastineau Channel, has resulted in the desertion of a large part of the town of Douglas, while across the channel at Juneau the low grade gold ores are not being extensively worked owing to the serious reduction in the producing power of gold. These circumstances, together with the completion of a large part of the Government railroad construction, has resulted in serious reduction in the Alaskan population. Furthermore, Alaska was hit by the war more severely than any of the States on account of the larger percentage of its population being male. Finally, wages are now substantially as high in the States as they were in Alaska during boom times, so that there is no longer the lure of high wages calling men to the north. In spite of all this Alaska as a whole has not fallen far short of holding its own.

Alaska presents great opportunities for development through its natural resources in timber, fisheries, stock raising, and agriculture. The salmon industry in southeastern Alaska has apparently about reached its maximum development, but the cod fisheries of Alaska are virgin fields and are richer and more extensive than any other banks on the globe. Substantially the same statement may be made about the herring fisheries. At the present time, however, the demands of the market are being fully met from the Newfoundland and Norwegian banks. The idustry may be conducted upon the yearlong basis and is capable of almost indefinite expansion, limited only by the demands of the market. The western part of the Alaskan Peninsula and the Aleutian Islands are grass-covered and present great possibilities for future development of the livestock industry. In the interior regions and to the north is a vast field suitable for reindeer. By July l the reindeer in Alaska will number about 200,000. Reindeer enthusiasts estimate that there is range in Alaska sufficient to maintain permanently herds aggregating ten million. If this is correct, the region will be a great future source of meat supply.

In the Fairbanks region there are now 100 homestead settlers. No. 1 hard wheat, as well as other hardy cereals, is being raised, and a flour mill has been ordered. The region presents a splendid home market for approximately one million dollars worth of farm products.

Mr. Sherman states that the conclusions and recommendations of the Committee would probably be made public by the Secretary of the Interior in due time.

Carrying Coals to Newcastle

The shipment of lumber to Alaska is like "Carrying Coals to Newcastle," yet in 1906, 87 per cent of the lumber and forest products used, of which we have record, was shipped from Oregon, Washington, and British Columbia, and 13 per cent came from the local National Forests. Fourteen years later 86 per cent of the timber used came from the National Forests, so that the conditions have been almost exactly reversed. The Alaskan Railroad Commission has been the largest importer of timber of late years. Douglas fir does not occur in Alaska and is needed for heavy construction work. Considerable amounts of box shooks are also shipped in for the canneries.

Aside from these needs it appears that the National Forests are filling the local demand. As to exports, Sitka spruce has been shipped from Juneau to New York for airplane stock, and the day is not far distant when pulp and paper from Alaska will go far toward relieving the paper shortage.

The following statement is interesting as showing the increasing use of timber from the National Forests:

	Domestic cut on National forests by fiscal years M ft. b.m.	Imported water shipments to Alaska from Washington, Oregon, and British Columbia M ft. b.m.	Per cent Domestic of total
1906	2,252	14,513	13
1907	2,673	21,958	11*
1908	6,316	20,203	24
1909	15,550	36,996	30
1910	11,012	23,469	32
1911	28,148	24,257	54
1912	44,648	4,603	91*
1913	33,535	2,136	94
1914	45,061	6,584	87*
1915	37,160	14,912*	71
1916	35,019	49,950*	41
1917	46,621	14,726*	76
1918	47,902	6,145	89
1919	44,764	7,501	86
Total --	400,661	247,953	62
Average 14 years -	28,619	17,711	62

*These large imports due to lumber shipped in for immediate use of Government railroad.

**Data for lumber imports from West Coast Lumberman, May 1, 1920.

CLINTON G. SMITH.

Barnes' New Job

Will C. Barnes is feeling very much puffed up these days at receiving a letter from the President appointing him as a representative of the Department of Agriculture on the United States Geographic Board. The only drawback to the job, Mr. Barnes states, is that it carries no pay.

A New Way to Beat Old H.C.L. (?)

On the Form 24b accompanying a Form 5a voucher received from one of the Eastern Forests covering purchase of hay, the item is shown under "Meals, Lodging, etc." How about it--did the Forest Officer eat the hay or sleep on it ?

Mr. Potter

A letter received from Mr. Potter under date of May 23 from Los Angeles states he arrived there safe and sound, after a very pleasant trip across the country, barring a few days of rain and mud while passing through Missouri. His actual running time from Washington to Los Angeles was 20 days, covering a distance of between 2600 and 2700 miles. The only trouble he had on the whole trip, outside of getting stuck in the mud once or twice, was the breaking of a spring which he had repaired at Trinidad, Colorado. He states he is feeling fine and in line for anything which does not sound like hard work.

W.C.B.

Washington Notes

Franklin H. Smith has submitted his resignation, effective June 15, to accept a position as statistitian with the National Lumber Manufacturers Association. Mr. Smith has been connected with the Forest Service for a number of years and is a recognized authority on forest statistics. Everybody is sorry to see him leave the Forest Service and everyone hopes that the new job will prove to be as satisfactory and desirable as it sounds.

John F. Preston, formerly in charge of Silviculture in District 1, has arrived in Washington to take up his work as Forest Inspector in the Branch of Forest Management.

J. G. Falck, Property Auditor at Ogden, is in the Washington office for a short stay.

Paul D. Kelleter has returned to Washington from Deadwood, South Dakota, where he went to attend a suit against the C. & N. W. Ry. Co. The case has been postponed until the September term of court.

Acquisition

The National Forest Reservation Commission at its meeting on June 2, approved for purchase 28,790 acres of land in the White Mountains and southern Appalachians in 96 tracts, at an average price of $5.64 per acre. Approximately one-half of this land is located in the White Mountains, there being 13,191 acres in Grafton County and 111 acres in Carroll County, the largest tract being one of 11,814 acres.

In Tucker County, West Virginia, on the Monongahela Purchase Area, one tract of 1,014 acres was approved for purchase at a price of $3.60 per acre.

On the Boone Purchase Area in North Carolina, there was approved for purchase a total of 257 acres at an average price of $4.84 per acre, of which 117 acres are in Avery County and 140 acres in Burke County.

In Georgia 650 acres in five different tracts in Union and Fannin Counties were approved for purchase at an average of $6.49 per acre.

In Lawrence and Winston Counties, Alabama, 4,490 acres in 26 tracts were approved at an average price of $4.95 per acre.

In Arkansas the purchase of 9,077 acres in 56 tracts, located chiefly in Montgomery, Polk, Scott, Perry, Newton, Pope, Johnson and Searcy Counties was authorized at an average price of $5.45 per acre.

District 1 - Northern District

No little apprehension is felt by the Missoula office over the possibility that the Government will lose a case before the Supreme Court which involves the Northern Pacific selections within the indemnity strip of their land grant. Some years ago patents were inadvertently issued to about 5,000 acres of land in Natio Forests in Montana, based upon selections by the Railroad Company of land within

District 1 - Northern District (Cont'd)

the indemnity strip. When the attention of the Interior Department was called to this error, that Department requested the railroad company to return the patents for cancellation. The company refused to comply with the request and the Govern-brought suit to cancel the patents. The Government lost the suit in the Federal District Court and again lost in the Court of Appeals. The case will now be carried to the Supreme Court. If the decision is adverse it would place in jeopardy about 4,500,000 acres of National Forest land, that being the estimated shortage in its grant claimed by the railroad company. The Solicitor of the Department, recognizing the gravity of the situation, plans to instruct the Assistant to the Solicitor at Missoula to report in Washington in the near future for the purpose of cooperating with the Department of Justice in the preparation of the appeal and assisting generally in the conduct of the case.

Excellent cooperation from all classes of citizens was extended the Service during fire prevention week. Merchants of the various towns offered window space for the display of fire-fighting equipment, devices for forest protection, and other exhibit material. Newspapers assisted in calling attention to the necessity of protecting the forests both on account of the need for saving timber and also to preserve the wonderful recreational value of our woodlands. Moving picture houses showed slides illustrating three-minute talks by Forest officers on protection and kindred subjects. From all reports fire prevention week was a decided success, and it is very much hoped that a considerable amount of good will result.

A report prepared by Grazing Examiner Horton of District 6 has been received which gives the results secured in the eradication from one range of Water Hemlock, the roots of which are extremely poisonous to man and beast. The infested area covered by this report is confined to a narrow strip extending nowhere more than a few feet from the stream or swamp, and many plants were found growing in the streambed and on rotten driftwood. It was necessary to grub the plant growing on the logs in the water, as cattle had waded in and eaten them, occasionally with fatal results. The plants were pulled out by the roots, put in fish baskets when wading was necessary, and later piled on logs to be dried and burned. Care is necessary to prevent cattle from eating the roots during the process of drying because they are highly poisonous even when partly dried, as was proved conclusively by one inquisitive cow that died from the effects of this plant.

C. L. Billings, who has been connected with the Forest Service since 1910 in various positions ranging from Forest Guard to Forest Examiner, has resigned to accept a position as Manager in the Lands Department of the Rutledge Lumber Company, Coeur d' Alene, Idaho. Mr. Billings' loss will be keenly felt by the Forest Service as he was a most valuable employee, and his recent work in exploiting hitherto undeveloped forest products of the District was especially commendable and promising.
The Forest Service extends every good wish to Mr. and Mrs. Billings for contentment and prosperity in their new home.

J. W. Girard recently returned from a field trip and brought back some specimens of western yellow pine stumps which suggest an interesting problem. The area in question is in the western yellow pine type 10 to 12 miles south of Libby, Montana, on the Libby Lumber Company's sale. The timber was cut several years ago, stumps being 2 to 3 feet high. The timber was from 140 to 160 years old. From the stump records the trees grew very rapidly until they were 70 to 90 years old, then slowed down very abruptly. This was true in all cases noted, and indicated that there was some common cause for this fact. The underlying soil is reported to be gravelly and with a hardpan at about 30 inches depth. It is probable that the layer of hardpan is the cause. As a consequence, it is needless to indicate a rotation of over 90 years for this area, and the marking should likewise be influenced by this fact; that is, if the hardpan really is the cause. Further investigation would, of course, be needed to verify this theory.

District 2 - Rocky Mountain District

About 20 miles of road project in Big Thompson Canyon, built by the State under Section 3 of the Federal Aid Act, was opened on Sunday, May 30. Practically the entire project is within the Colorado National Forest, and now that it is improved, forms the main avenue of approach to the Rocky Mountain National Park.

District 2 - Rocky Mountain District (Cont'd)

The opening was the occasion of a celebration attended by several hundred people. The Service was represented by the District Forester.

John W. Lowell, Jr., District Forest Inspector, in charge of the Shoshone National Forest, has sent in his resignation, effective June 15, having received a very good offer from a stock company.

W. L. Barker, Jr., Surveyor, has just returned to the District Office after a week spent in a number of the small towns in the State on road work. He reports that in every town he visited last week the Forest Protection Week posters and literature were prominently displayed; and everyone he talked with seemed to have a clear idea of the meaning of this publicity work and the necessity for the prevention of forest fires.

W. I. Hutchinson of the Office of Information, is on a trip over the San Isabel Forest with a representative of the"Universal Weekley." Immediately following this trip he will cover the same Forest with two moving picture experts representing the Missouri Pacific. The pictures will be used by the railroad company in its publicity work, in directing and encouraging tourist travel.

District 3 - Southwestern District

The Gila Lumber and Milling Company has purchased 5 million feet of saw timber from the Mount Graham division of the Crook National Forest. The logging to the mill, which is located in the woods, will be by overhead cables and donkey engines. The lumber, after milling, is flumed to the bottom of the mountain, a distance of 7 miles, there planed and hauled to the Arizona Eastern railroad at Thatcher, and marketed up and down the Gila Valley and at Globe. For a small operation, this one presents more difficulties per "thousand feet" than any other operation in the Southwest, as witnessed by the string of past operators who have retired from the field without the customary payment of large dividends. The stumpage rate is $2 per thousand. Approximately 3½ years is allowed for the removal of the timber. The species involved are Douglas fir, western yellow pine, white fir, Engelmann spruce, Mexican white pine, and cork bark fir.

A new wrinkle from the Prescott for sealing fire tool boxes during fire season: (1) Lock the seal; (2) Pass the looped end through the yoke of the closed hasp; (3) Pass the lock through the two loops and lock. Hard to describe but easy to do. This enables you to open the box without breaking the seal (a fellow seldom has a seal with him when he needs it!) and in case of fire enables your cooperators to open the box without breaking the lock. (Don't* to attach the chain to the box, so that when the seal is broken the lock won't drop to the ground and get lost in the shuffle. Such little precautions help conserve 858's.)

The greater part of the grazing letters of transmittal for 1920 have been received and checked. The Crook, Datil, Gila, Lincoln, and Tonto Forests are tied for first place, no mistakes having been made in figuring grazing fees on any of these Forests. Congratulations! Let's make it a clean sweep next year.

"Under the spreading walnut tree the village smithy stands." Most of the Prescott stations are decked out with spreading walnut trees where the brawny Ranger tacks shoes on his gentle charger. Speaking of walnuts: Several Prescott ranchmen are trying the Biederman method of grafting English walnuts onto native walnut stocks.

The following organization changes are being announced at this time. Supervisor Deering has, at the special request of District Forester Redington submitted through Col. Greeley, accepted transfer to D-5 as Assistant District Forester in charge of Operation to succeed Mr. Don P. Johnston. Supervisor Wales of the Coronado succeeds him as Supervisor of the Prescott. Mr. Calkins of the District Office in turn assumes charge of the Coronado as Supervisor. These changes become effective June 15. Effective July 1, Mr. Shepard of the District Office assumes charge of the Manzano as Supervisor, relieving Acting Supervisor Putsch who has been temporarily in charge since Mr. Mullen's assignment to the District Office of Operation. Mr. Shepard's position in EC will be filled by

---

*forget

Mr. Ancona, and Mr. Putsch will transfer to the Gila as Deputy, taking the place vacated by Mr. Scott when he assumed charge of the Tusayan as Supervisor. Mr. Kissam will continue as Deputy on the Manzano. At an early date Mr. Burrall will assume deputy supervisor duties on one of the Forests, completing the reduction in the District Office force insofar as present plans have been worked out. District Forest Inspector Kircher, in addition to his fire inspection duties, takes over the work of preparing a coordinated minor road and trails plan for the District in cooperation with District Engineer Long, which will give for small road projects the same degree of control we now have for improvements as the result of Mr. Calkin's work during the past year. As the result of Mr. Kircher's fire inspection assigmment, it is believed that a better coordinated control of protection finances will also be possible, enabling us to secure a fairer distribution of money and of the protection force on a District-wide basis.

"Lee Patterson and Carl Starks, of Pine, recently treed a lion near Buckhead Mesa. Having no weapons, they climbed the tree, roped his 'Royal Highness,' suspended him over a limb and killed him with a hatchet. Ranger Rencher secured his hide which he will have mounted."

- Tonto

The "shortage of planks" referred to in the Bulletin of May 27 recalls the current newspaper topic last February upon the resignation of Secretary Lansing, to the effect that lumber would undoubtedly increase in price as the President was making a change in his cabinet.

A bombshell has recently exploded in the local cattle market. Steers were contracted early in the spring at the very high prices of $40 to $42 for yearlings, with older steers in proportion. Now, right at delivery time, comes a a drop of $8 to $10 per head, with the result that some of the buyers are sacrificing their forfeit money, while those who are accepting cattle are cutting back all but the very choicest ones. It is reported that the Bar-F-Bar outfit, which has the finest bred cattle in this part of the country, had 550 head cut back out of 1,200. Some of the purchasers have arranged to have the stockmen hold their steers until fall, in the hope that the situation will be relieved by then.

Several reasons and exceuses are offered for the situation, but the consensus of opinion is that it is caused by tightness of money. Also, it is noted that all of the cattle were purchased this year by comparatively small commission men, who bid against one another pretty hard, and prices were crowded up so high that the old reliable purchasers would not do business. It is a clear case of attempted profiteering by the commission men. Owing to the reaction, they have failed entirely; but the producers are the heavy losers, as practically all of them have obligated themselves to pay off debts from money which they expected to receive for their cattle this spring.

Some are wondering if this is the beginning of a reaction in the infalted prices of things in general.

- Kirby - Crook.

A queer experience in motor lubrication is reported by three reputable Forest officers who recently returned from a field trip. In following a rough road, the drain plug of the crank-case was knocked off by a high stump and all of the oil was lost. The party stopped at the hut of a poor Mexican farmer in the forlon hope of getting some oil. Yes, he had oil - oil rendered from the fat of two wildcats he had trapped during the winter. Gladly the travelers bought this oil, little anticipating the dire consequences. No sooner was the wildcat oil poured in and the car started than the motor began to purr with a strange wild note. It was with difficulty that the car could be restrained, and all control was lost when it jumped a jack-rabbit and, with a loud m-ee-aow, started in pursuit across-country. The bloody fate of the jack-rabbit would have been certain had it not been for a sheepherder's dog that dashed out and treed the car in a pinon. These travelers are enthusiastic over the possibilities of using wildcat oil for rejuvinating broken-down Fords.

Ranger Anderson says "Reference is made to a recent item relative to Jacks-of-all-trades: Let us see what is expected of a District Ranger: He is supposed to be a civil engineer, carpenter, architect, draftsman, silvicultural expert, scaler, grazing expert, landscape gardener, soil expert, orchardist, stockman, fire-extinguishing expert, topographer, machinist, broncho buster, packer, painter, interior decorator, telephone engineer, clerk, blacksmith, road and trail builder and, last but not least, an expert accountant, in order to keep his bank account from being carried in the "red" before his next check comes in. The Favorite Writer apparently never understood the necessary qualifications when he stated that 'Handy Andy's' were never seriously considered."

- Tonto.

When do the deer shed their horns? Ranger Oldham of the Prescott picked up a newly shed five-point blacktail horn on May 11. The horn was lying in a trail at a spot he had passed two days before, at which time the horn was not there. There were also fresh tracks and rubbings. Evidently this buck had cast his horn on May 10. Can anybody else give any dates backed by real evidence? Data on when fawns are born is also rather scarce.

"The trail and road sign posting so far done shows quite clearly that two signs are usually needed where one is thought of." - Carson.

Sign posting time is the best time to make out requisitions for next year's year's sign shop. Fill the gaps when they are seen.

"The Tonto bids fair to become a game refuge not because of the dense timber in and around Roosevelt, but in spite of it. Last month a mountain sheep established headquarters on the mountain south of the Supervisor's office and this month an elk located on the same range. We are now hoping for more of both kinds and maybe a few buffalo and polar bear to supplant our supply of centipedes and Gila Monsters and last, but not least, we want a bunch of cactus cats to keep down the reproduction of mescal, chollas and saguarahas which threaten to engulf us in a thicket of thorns. How do we get this way? Who wants to know!"

- Tonto.

Editor's note: Saguarahas is a new one.

"While coming down the Portal-Chiricahua Peak Trail recently a small flock of Mexican Parrots, consisting of from 8 to 10 pairs of birds, was noticed. They were 'working' in the Apache Pine stand between Fossil and Cypress Saddles, at an altitude of approximately 7500 feet and carrying on in their usual noisy manner."

- Deputy Supervisor Schoenberg.

"The first big fire of the season occurred yesterday on Penasco Lumber Company lands in Rice Canyon. The Penasco Lumber Company force, aided and directed by Ranger Felts, started work on the fire and were later reinforced by Ranger Smith and a number of fire fighters from Cloudcroft together with Supervisor Arthur, who went up in a car accompanied by Clerk Richards. Although things looked pretty serious for a while, due to the extremely dry condition of the forest and the wind which prevailed, the fire was gotten under control late in the evening. The fire is believed to be of incendiary origin and an effort is being made to apprehend the guilty party."

- Lincoln.

"We hired nine Indians for work on the Workman and Pueblo Creek trails for $3.50 per day. They were broke; we purchased $140 worth of supplies, hauled them in our two-ton International to the scene of action. They fed up and struck for $4.00; were told to beat it; changed their minds and went to work again."

- Tonto.

The Chief U. S. Game Warden has issued instructions to deputy federal wardens concerning the rights of Indians to hunt on and off their reservations. Hunting and fishing rights on Indian reservations have generally been reserved to the Indians by treaty, and offenses against either federal or state game and fish laws committed by Indians on their reservations are left to the action of the tribal authorities. Federal wardens have no authority to arrest Indians for committing violations while on their reservations. Persons other than Indians, however, may be arrested for violation of federal laws on Indian reservations.

In a telephone line built in 1911-12 on the Manzano, 218 aspen poles treated with creosote were used. Four poles have been replaced and 25 more will need replacement soon. It is stated that poles with a top diameter of 4½ and 5 inches are still safe to climb. Experience in this case indicates longer life for treated than for untreated Douglas fir.

District 4 - Intermountain District

Recently Ranger Mayett and Ranger Schoeller accidentally happened on a fishing party consisting of two men and two women who had eighty-five fish in their possession before the opening of the season, at Peavine Creek. These parties were arrested and taken before the Justice of the Peace at Tonopah, who, owing to personal friendship for the offenders, reluctantly heard the case. The men were found guilty and paid a fine with costs, totaling a sum of $125. The ladies, upon pleading not guilty, were turned loose. The entire case from time of detection to final disposition by the Justice of the Peace took less than twenty-four hours. The Nye County officials reimbursed the Rangers for their actual expenses. Ranger Mayett states that the officers of the new Nye County Fish & Game Club, upon hearing of the arrest, looked him up and offered their assistance and support in handling the matter.

The following is quoted from a letter of instructions issued under date of May 10, by Otto M. Jones, Idaho State Game Warden, to his entire force of field Deputies:

> "Following the policy adopted during the fire hazard period of last season, I am instructing you, at this time, to keep a close watch on all campers or tourists coming within the timbered area of your district; and to cooperate to the fullest extent with the forest rangers or forestry officials in the matter of running down persons who are careless with their fires and who might set fires in your district.
>
> "You may arrest and turn over to the forestry officials anyone caught setting fires or allowing fires to spread in the forests. You will also assist wherever possible in putting out fires that have started in your district.
>
> "Appreciating the damage done by forest fires to fish and game, this action has been taken by me and made a part of your work and will continue to be a part of your work each season that you are with this department."

District Forester Kneipp, in expressing appreciation of the above action on the part of the State Game Warden, has assured him that our field organization in southern Idaho is at all times ready and willing to assist as fully as possible in securing strict enforcement of the Idaho game laws.

District 6 - North Pacific District

The exhibit by the Forest Service, Western Forestry and Conservation Association, and the Oregon State Fire Association, which was held at the Portland Library Building during Forest Protection Week attracted considerable attention and widespread comment. In the entrance hall and corridors there were announcements of Forest Protection Week and signs directing visitors to the exhibit proper. There were also fire warnings, pictures, and slogans effectively arranged upon framed burlap, while the stairways leading to the exhibit were lined with real forest trees which were arranged so as to suggest an entrance to the forest.

The main exhibit occupied a large room on the third floor and reviewed all of the activities connected with forest utilization. It would be difficult to say what part of the exhibit attracted most attention. A large number of carefully selected pictures dealing with all kinds of work on the National Forests, and chosen to appeal to persons of widely varying interests, were favorably commented upon. The number of schoolteachers who brought their classes to the exhibit found these pictures of considerable value. The Osborne fire finder and heliograph came in for their share of attention. Collections of cones and seeds of specimens showing various tree diseases, Forest Service flags and shields, and a small exhibit from the Biological Survey, formed part of the exhibit. Through the courtesy of the artist, R. Bruce Horsfall, of Portland, several of his small oil canvasses of birds were shown.

Library authorities say the exhibit is the best of the many which have been in the library. They request that it be left standing after Fire Protection Week.

Fire warning notices and Forest Protection Week announcements have been placarded in the fourteen branch libraries of Portland. Lists of books on forestry and allied subjects available in the library were drawn up and are available for free distribution in the exhibit. The library authorities afforded the fullest and most generous cooperation.

A. J. M.

Larch Mountain is now a part of the Oregon National Forest, the President's proclamation having been signed May 20. The way is now open for carrying out the proposed land exchanges which, when completed, will bring most of this area so interesting to local hikers under Forest Service administration and protection. This inclusion in a National Forest of the north slope of Larch Mountain adds some 12,000 acres to the 14,000 acres hitherto included in the Columbia Gorge Park division of the Oregon. Among the organizations which have worked toward saving Larch Mountain for its recreational use are The Trails Club, Portland Chamber of Commerce, and the Kiwanis Club.

Smith Riley once wrote that everyyForest officer had a wonderful opportunity and responsibility to become an expert on game, on wild life, and the ways of nature. According to a story in the Wenatchee (Washington) Daily World, Supervisor A. H. Sylvester can qualify already as an authority on Indian names, habits, and haunts of the game, and the ways of wild life.

Forest Ranger Albert Weisendanger supplemented a recent informal talk on fire prevention made at Eagle Creek Camp Grounds to about 25 children by a talk on tree planting, at the end of which he gave each boy and girl a tree left from the recent reforestation on the Eagle Creek Camp Grounds, to be taken home and planted as a belated Arbor Day observance.

As a part of the Forest Protection Week campaign, special letters were sent to some 1200 county judges, sheriffs, and justices of the peace in Oregon and Washington, asking their cooperation in fire law enforcement. The following letters show that this effort was distinctly worth while.

From a judge in Clackamas County, Oregon:- "This is to acknowledge receipt of your circular letter in regard to forest protection and to say that I will have it published in our local papers, or as much of it as they will give space for; and I also assure you that I am willing at any time to be of any service I can in this important matter."

From a Washington County (Oregon) justice of the peace:- "Your communication of May 24, 1920, received. In answer to your very interesting letter I will say that perhaps I have neglected my duties in not giving this subject proper thought. A weak law strengthens a bad man; any law not forcibly enforced has the same effect. Let me suggest this: At frequent intervals along the wooded springs, creeks, and rivers through which pass public highways, especially scenic routes, place signs reading, 'CRIMINAL OFFENSE to create out-of-door fires within five miles of this sign'; also CRIMINAL OFFENSE to mutilate, deface, destroy, or remove this sign. Fine in either case, $1,000; or five years imprisonment at hard labor and no parole; or both fine and imprisonment in the case of the fire being set by the incendiary. No parole in either case.'"

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

June 14, 1926.

Gene Bruce

The Great Forester has called Gene Bruce, and he has gone to make his final report, fearing death no more than he feared life, which was not at all. Gene Bruce fought hard and clean and took no advantage. He never shirked nor dodged an issue. He stood up boldly for the things he believed in, took hard knocks without flinching, and came back for more. He never quit, no matter what the odds. During his active life he faced death again and again, without fear, and when he finally looked out along life's trail and saw death just ahead and knew there was no escape, he fought with all the dauntless courage and will power that had served him so well before. He put his back to the wall, determined to go down fighting, and he did.

It is not easy to write of Death and the Dead, but if all of us feared death as little as Gene Bruce did Death would lose its horror and become what it was to him -- the Great Adventure, the crowning experience of our earthly lives.

Gene Bruce was a man's man -- sturdy, fearless, strong, and square. Passionately devoted to the great out-of-doors in which he spent so much of his life, he loved the wild things of the woods and open. And he was a good sportsman. In his hunting and fishing he took no unfair advantage of the game. Before his death he often sat near the spot he had chosen as his last camp ground and whistled to a cover of quail that lived in the nearby fields. And as his body was being placed in the grave those same quail began calling, softly at first and then more boldly, as though they knew that their old friend had come again, this time to stay. It was the kind of requiem that Gene Bruce would have wanted.

W. J. Mangan.

What Gene Bruce did for forestry and the Forest Service is summed up in the following extract from a letter sent to Mrs. Bruce by a committee of the Society of American Foresters:

"In the death of Eugene Sewell Bruce the foresters have lost a man unique in the history of American forestry, a pioneer builder of forestry in this country, and a wise and practical leader of the profession. The early growth of forestry in the United States was intimately bound up with his practical guidance and wise counsel. Bruce came in contact with forestry during the first work of the State and Government in the Adirondacks. At that time he was recognized as one of the most efficient of the practical lumbermen of the north woods. Twenty years ago when "Gene" abandoned a career rich in promise as a lumberman in private employ, there was a little band of foresters in Washington filled with enthusiasm but void of experience. Into this band he came, at a real sacrifice to his own financial future, but bringing with him a clear vision of better handling of the forests which he loved, and a grim determination to see this better handling realized. His ability to grasp what foresters were thinking about and his intimate knowledge of the difficulties in their path, made his services of inestimable value. He was the necessary connecting link between foresters and lumbermen, and by smoothing off the many rough points of contact between the two, he led foresters to understand lumbering and lumbermen to apply forestry. He was quick to grasp the conception of forestry, its place in the ultimate development of our forests and its relation to the practical side of the lumber industry. In those days he was perhaps the one lumberman who saw clearly that the vision held by foresters must soon be realized, and to the realization of this vision he gave the better part of his life. He believed in forestry. He believed in forestry so firmly that largely as a result of his own efforts lumbermen are now practicing forestry wherever Government timber is harvested. To those of us who are still plodding along the trail his loss is softened by the knowledge that he lived to see the accomplishment of his aims. He brought his vision down to earth and made it work.

From the very beginning Gene was directly connected with many different phases of forest work undertaken by the Service. Before the days of National Forests he assisted as no other man could in the preparation of working plans for private timber lands. When the public forests were turned over to the Forest Service his advice in framing the timber sale regulations was indispensable. Probably his greatest service of all lay in his supervision and inspection of the many active timber sales, for into such work he carried the hard-headed experience of one brought up in the lumber industry itself, to which he added an adequate understanding of what foresters were after and a rare tact for accomplishing the results desired. On more than one occasion in those ~~day~~ early days it was Gene who saved the day for forestry. In more recent years his time was occupied largely on problems connected with the acquisition of lands under the Weeks Law, and in this field he served with marked success. He placed public interests above his own personal advantage and with the zeal of a new convert to a great cause fought for them courageously without sparing himself in the face of opposition and antagonism.

Into the ranks of foresters he brought those traits characteristic of a strong man schooled in the lumber woods - self-reliance, ingenuity, persistence, confidence in his own judgment, and the tendency to hang to his own point of view and fight for his principles to the bitter end, but his sterling qualities, his straight-forwardness, integrity and fairness commanded the respect and admiration of even his worst antagonists. To foresters that is precisely what made him so lovable. In spite of his many brisk tilts with the young foresters, there was always the profoundest mutual respect between "Gene" Bruce and those to whom he was intimately known. He has left his mark upon the foresters of the country. There is no other like him".

Henry E. Surface Killed in Railroad Accident

Henry E. Surface, former chemist in forest products for the Forest Service, was killed on June 8 in a railroad wreck near Schenectady, N. Y. The news of his tragic death will come as a schock to his friends and associates all over the country, for Surface was a man who made and held friends wherever he went.

Entering the Forest Service in 1908, Mr. Surface became a recognized authority on all matters relating to pulp and paper production and during his connection with the Service he had a prominent part in the excellent work done at the Laboratory in furthering our knowledge of making paper from new species, and in other related matters.

In 1915 at the request of the New Zeland government, he investigated and reported on the paper-making possibilities of the timber of that country, a piece of work for which he received highly merited praise. After his return to the Forest Service he was assigned to the investigation of possible locations for pulp and paper mills on the National Forests, and to the study of a wide range of economic questions relating to the pulp and paper industry. It was probably in the latter field that he rendered his greatest services. Few men in the United States had his grasp of the economics of the pulp and paper industry as affected by the location and production of timber, its most important raw material. His known integrity, absolute accuracy, and close attention to detail caused his opinion to be readily accepted by the men in the paper-making industry. Last year Mr. Surface left the Forest Service to become valuation engineer in forest industries in the Income Tax Unit of the Bureau of Internal

Revenue. In this work his broad knowledge was of the greatest value in meeting the many difficulties involved.

Although still a young man, Surface had already made his mark. His record was one of accomplishment and steady progress, with every indication of a bright future. His personality was one of rare charm that secured for him many close friends among the men with whom he worked. To them, he was "Baron" Surface and it is by that name that they like to remember him.

Straight Talk from California.

I have read with great interest Headley's and Kelley's dissertation on allotments. Knowing both of them pretty well, and having fought through a good many Forest allotment estimates with them, I believe I know what they would like to be able to do. It would be ideal, of course, if they had the data needed to allot money on a true basis of comparative needs, and I have no doubt it can be done in time, but with a stationary appropriation over a period of almost ten years, during which time the rough spots in needs have presumably been largely eliminated, it seems to me that the effort is hardly worth while. I would, however, like to see a statement for the entire Service organization, showing by years how the money has been spent. In other words, what does it cost to carry the Washington and District office organizations, eliminating as far as possible everything but true overhead?

Perhaps I am alone in the hunch that I have had for years - that the Service organization has been building up faster at the top than on the Forest units. Headley and Kelley say, "What does it cost to run a District? and why?" Supervisors who have been skimping along for years know how little they can squeak by on by stealing boards off the neighbors' fences and gathering up junk left by the Power Companies, and trusting in the Lord in some dangerous fire hazard. Its making old men of us fast, but if we all knew the overhead from Washington down were doing the same thing it would be a consolation at least. My question is, then, "what is the proper balance between overhead and Forest expenditures?" I think this has to be answered before any more drives are made on the Forests. We are going into the next year's work with greatly reduced allotments to say nothing of its buying power. Public service is bound to suffer, but is the field going to suffer more than any other branch? It looks like it to the men in the tall sticks. Put us right, Headley.

M. A. Benedict.

(Score one for the field! Benedict has landed a body blow, and on a sore spot at that. He speaks with the courage of his convictions. Maybe there are others with the same views who have hesitated to express themselves. Is he "alone in his hunch" that the Service organization is getting top heavy, or perhaps has already reached that stage? The question as to whether the pruning should be made at the top or the bottom of the tree is open for discussion. Operation promises to rise for a few remarks later on. In the meantime -- what about it?: Editor)-

Massachusetts Forestry Bill Changed

The Massachusetts State Legislature has materially changed the proposed forestry bill which was introduced at the last session. The legislature decided that it would be preferable for the State to purchase not more than 100,000 acres of land, and that instead of financing the work by a bond issue, the expense should be met by annual appropriations. The bill authorizing the commission of conservation to purchase not more than 100,000 acres was passed together with a resolution providing that the proposed law be submitted to the votes of the State at the next election.

While there is naturally a disappointment on the part of the people in Massachusetts who had hoped to commit the State to an extensive policy of purchase of lands for forest purposes, it is generally felt that a big step forward has been taken and that the way has been opened to demonstrate the practicability of growing timber.

Helping Other Bureaus of the Department

It shows a fine spirit to take an interest in the work of other bureaus of the Department, especially where it bears a somewhat close relation to our work. For several years the Forest Service has been cooperating with the Bureau of Animal Industry in the problems concerning the extermination of scab among sheep and the eradication of the tick on those of our Forests which lie within the tick-infested area.

Recently the Chief of the Bureau of Animal Industry, Dr. Mohler, wrote the Forester a very pleasant letter acknowledging the splendid cooperation which his bureau had received from members of the Forest Service located on the National Forests in the State of Arkansas. I am sure these words of commendation from Dr. Mohler will be fully appreciated by those Forest officers, and also encourage others to assist other bureaus, such as the Bureaus of Animal Industry, Plant Industry, Farm Management, Biological Survey, etc, the chiefs of which recognize, through our close relations with the permittees on our Forests, the splendid opportunity we have to aid them in making the general work of the Department satisfactory.

Will C. Barnes.

Government Employees Mutual Relief Association

On June 1, Paul D. Kelleter was elected a member of the Governing Committee and Secretary of the Association vice Charles H. Squire, resigned. The membership of the Association is greater than ever before and is made up very largely of Forest Officers. Notwithstanding the high cost of almost everything else during recent years, this organization has been able, without increasing the dues, to meet and pay promptly, within the limits provided by its Constitution, all claims presented.

Cooperative Fire Protection Fund Allotted

Secretary Meredith has approved allotments to the States from the cooperative fire protection fund as follows:

State	Protected area (Outside National Forests)	Federal Allotment 1920
Maine	12,000	$7,500
New Hampshire	4,085	5,800
Vermont	3,000	2,900
Massachusetts	2,500	2,900
Rhode Island	250	400
Connecticut	1,443	2,400
New York	5,089	7,500
New Jersey	2,166	2,400
Pennsylvania	10,000	7,500
Maryland	2,228	2,800
Virginia	4,619	4,500
West Virginia	4,450	5,000
North Carolina	1,710	2,300
Kentucky (a)	..	2,500
Louisiana	11,750	4,600
Texas	4,674	4,300
Michigan	14,574	6,500
Wisconsin	10,260	5,000
Minnesota	14,250	7,500
South Dakota	49	100
Montana	3,086	3,300
Idaho, D-1	2,375	3,200
D-4	825	1,500
Washington	7,500	7,500
Oregon	11,586	7,500
California	13,000	5,700
Total	147,469	$113,100
Administration and inspection charges		10,510
Unallotted balance (b)		1,390
		$125,000

Cooperative Fire Protection Fund Allotted (Cont'd)

Allotments are subject to change by the Forester if (1) State appropriations are increased or reduced; (2) exceptional hazard occurs in certain States; or (3) the hazard in certain States is abnormally low.

Supplemental allotments from any surplus available in the second half of the Federal fiscal year may be made by the Forester as may in his judgment seem desirable.

All expenditures will be for the salaries of lookout watchmen or patrolmen, except in cases of emergency.

The total yearly expenditure throughout all the cooperating States by private owners, as individuals or associations, is at least $700,000, which is, of course, in addition to the upwards of $800,000 as shown in the budgets of the States.

(a) Cooperation temporarily discontinued; will probably be resumed in the autumn.

(b) For allotment to States which may through the enactment of legislation in 1920 meet the requirements of the law, or other States subject to unusual fire hazard.

Legislation

A resume of legislation affecting National Forests enacted by the 66th Congress up to the date of adjournment, the evening of June 5, shows that during this Congress 40 land exchange bills were introduced in the House and Senate. Three of these were enacted into law, namely, a general bill for the Sierra National Forest, a general measure for the Oregon National Forest, and a special bill for John Zimmerman on the Colorado National Forest. Of the 37 bills now pending, three have already passed the Senate and six have been reported to the House with favorable recommendations from the Committee on Public Lands.

Twenty-two bills were introduced providing for additions to National Forests. Five of these were enacted into law, resulting in additions to the Ochoco, Oregon, Siuslaw, Crater, and Caribou National Forests. Seventeen bills providing for additions to the National Forests are pending at the present time and retain their position on the calendar for consideration next session. Of these, one providing for an addition to the Humboldt National Forest has passed the Senate, and three, providing for additions to the Weiser, Nezperce, and Targhee National Forests, have passed the House. A bill providing for an addition to the Lemhi National Forest has also been favorably reported to the House by the Public Lands Committee.

Twelve bills were introduced providing for new National Parks or additions to existing National Parks. One, providing for the creation of the Zion National Park in Utah, became a law. Of the 11 bills now pending one has passed the Senate, the bill providing for an addition to the Crater National Park, and one, providing for the establishment of a Redwood National Park, has passed the House.

A number of other laws were enacted of a general nature of interest to the Forest Service. The most important were the coal and oil leasing bill, a bill disposing of 80-rod reserve strips between entries on shore lines in Alaska, and a bill granting certain lands to the City of Pocatello. All of these measures were favorably reported upon by the Forest Service. Another law makes a grant of land to the City of Boulder, Colorado. This was not favored by the Forest Service, but a general measure was advocated in place of it.

Other measures of interest were a bill introduced by Senator Jones of New Mexico prohibiting new Forests in New Mexico and Arizona without approval of Congress, whichpassed the Senate, while Senator Poindexter's bill appropriating one million dollars for wood pulp survey; Congressman Gandy's bill providing for the establishment of the Custer State Park Game Sanctuary in the Black Hills; Congressman Weaver's bill providing for the quieting of equities in the Olmsted lands in the Southern Appalachians; Senator King's bill providing for the transfer of the Bureau of Fisheries to the Department of Agriculture; and the water power bill, which, as far as could be learned, have not been signed by the President up to this hour.

Legislation (Cont'd)

Taking into consideration the important matters before Congress, it is felt that the Forest Service has been very successful in securing legislation and that the measures now on the calendar place us in an excellent strategic position to secure the enactment of a considerable number of desirable measures next winter.

A New Fire Cooperation Agreement

On May 21 a new cooperative fire agreement was signed by the Vice President of the Northern Pacific Railroad and District Forester Cecil. This agreement is of considerable importance for a number of reasons, but it has four outstanding features: First, the District Forester defines natural protection units, and the cost is computed separately for each one of these natural units; second, the cost of protection is pro rated on an acreage basis to owners of contributing lands only. The forest Service does not carry the charge for all non-contributing lands, as has sometimes been the case. A third point is that after the end of each month in which there is fire danger the District Forester submits a bill to the railroad company covering the company's share of the cost of fire prevention during that month. This is a novel method which, so far as I know, has never been seriously considered before. It will require a running calculation of the cost of protection and may easily lead to some rather important constructive work on the financial side of fire protection. A fourth point is that at the end of the season the company pays its share of the cost of fire suppression for the season. This differs from the California method of fixing a flat payment based on experience and intended to cover the average total cost of suppression and prevention. The District 6 method is probably preferable for the northern district where great fluctuations in the amount of fire suppression expenditures are to be expected.

This is the first agreement to be signed following the Forester's consent to have such agreements handled by the District Foresters rather than by the Washington office. If the Northern Pacific agreements are negotiated successfully and stand up under the test of time and experience one more step of decentralization will have been proven to be sound.

Roy Headley.

District 2 - Rocky Mountain District

At a hearing before United States Judge James D. Elliott at Sioux Falls, South Dakota, May 29, the right of the United States to include in the damages following a fire trespass the wages and expenses of Forest officers engaged in fighting the fire, was upheld. The question arose on motion of attorneys for the C. & N.W. Ry. Co. to strike out allegations from the bill of complaint filed on account of a fire which destroyed a considerable amount of reproduction, but in which the principal element of damage was the labor and expense of putting out the fire.

The French Creek unit on the Harney Forest which contains 2,225,000 feet of western yellow pine saw timber was sold at the advertised rate of $4.00 per thousand feet b.m. for live timber and $1.00 per thousand feet b.m. for dead timber

On Friday evening, June 4, District Forester A. S. Peck delivered an address before the Colorado Mountain Club. Following his lecture, four moving picture reels, taken by W. I. Hutchinson in charge of Information of this office, and Mr. F. E. Colburn of the Iowa State College last summer of the Colorado National Forests, were shown for the first time.

A great deal of favorable comment was heard from the audience of about 200 people, and the Mountain Club members particularly thought that they were a good advertisement of Colorado and Colorado scenery. Favorable remarks were made on the amount of human interest worked in to relieve the monotony of straight scenic views. It is anticipated that there will be a great deal of demand for these films.

L. H. Douglas, Inspector of Grazing, is in conference with the Extension Department of the University of Wyoming this week with a view to working out a plan of management for some of the range holdings of the University.

The Supervisor of the Bighorn Forest interviewed the Bankers of Sheridan, Wyoming, recently in connection with the delayed payments and grazing fees which are more prevalent than usual this year on that Forest. He was told by the bankers that a great many stockmen borrowed money to pay their grazing fees and the banks preferred, in view of the tightness of the money situation, not to let money go for any longer than could possibly be helped. While the grazing fees for a given locality may not be very large, with a good percentage of the stockmen over the country paying their fees with borrowed money, it can easily be seen that the aggregate would total a large amount. This factor is doubtless responsible for more delinquencies than usual this year under the clause requiring that grazing fees be paid thirty days in advance of the grazing season.

Assistant District Forester John H. Hatton returned recently from a trip to the Black Hills Forest where they have had an exceedingly adverse winter. Dead horses are seen everywhere on the range and settlers estimate a 50 per cent loss on horses where they ran out and depended on what they could rustle. It is thought that the estimate is too high, nevertheless there was a heavy loss.

Reports were heard also of a good many deer dying from exposure and starvation.

The prospects are good for an excellent feed year in that locality this season.

Largely through the activity of Ranger Sharpe on the San Isabel Forest, a number of forest users living in the vicinity of Cotton Creek have formed an association known as the Cotton Creek Wood Users' Association, which has for its purpose the construction of a timber road into a body of timber from which members of the association will secure free use material and make small sales for their own use. This association has been formally recognized by the Forest Service in the same manner as livestock associations, and it has been agreed that permits for this particular body of timber will be issued only to members of the association doing their share of work on the road, or to new members who are certified by the secretary of the association as having contributed their proper share. The privileges will, of course, not be transferable. Encouraged by the possibilities as to free use and small sales, the association now has in mind extending its scope to cover another tract of timber nearby which will be made accessible by the road, to be taken out in somewhat larger sales, but chiefly for the use of the members of the association.

District 3 - Southwestern District

We have all heard of Mr. Volney Hoggatt, editor of the Great Divide and one of the most outspoken critics of the classification work and policy of the Forest Service. Only recently, on his challenge, a joint examination was made of the east side of the Ashley Forest in District 4 in which Mr. Hoggatt, District Forester Kneipp and Attorney T. G. Shearman of the Solicitor's office participated. Result: Mr. Hoggatt now freely admits that he was badly misinformed as to conditions on the Ashley, and District Forester Kneipp expresses great satisfaction in the classification work.

Simultaneously a joint examination was being made of parts of the Coconino and Tusayan Forests in this District for evidences of sheep damage to yellow pine reproduction. This examination was undertaken at the request of the Arizona Wool Growers' Association and participated in by a special committee of the Wool Growers, local District officers, Mr. Pearson, and myself. Result: The Wool Growers now freely admit the existence of serious sheep damage and the need for control measures of some kind, while the District has the makings of a perfectly feasible and reasonable remedial plan to be put into action next year.

District 3 - Southwestern District (Cont'd)

Joint examinations do not entail the surrender of our claim to sole responsibility for needed administrative measures to protect the National Forests or of our right of ultimate decision. In fact, they entail no concessions of any kind whatsoever. They do, however, if honestly undertaken in an openminded spirit, demonstrate that there is nothing hidebound in our organization and afford an opportunity we should welcome of exploding false criticism where we are in the right and of frankly and openly rectifying mistakes where we are wrong. The world respects the openminded man and full and free discussion of misunderstandings, and joint consideration of evidence on the ground inspires confidence. It is a mighty weak case that will not stand the light of day and a few broadsides of public criticism. These joint examinations are among the best ways to get cooperation in substance instead of in form only. Let us all try t bring our Forest users to a realization of the fact that we are not an impersonal organization working apart by itself but no more nor less than their representatives, engaged in doing their own - the public's - job. As such, we are entitled to their assistance in carrying out wise regulations and in modifying unwise or outgrown ones. To put Forest officers on a police footing is poor business We can do much more if given time for constructive planning for th use and development of Forest resources. Once we can get that ide fairly across - and we can if we go at it in the right way - we shall have more advisory boards that advise, more individual users who assist, and a far better record of constructive accomplishment.

F.C.W.P.

Several Forests supply to local newspapers short news items on current Forest activities which are published under the caption "Forest Notes." This is a good way to keep publicity alive when there are no big stories.

As briefly noted in a recent Bulletin, Forest Supervisor Robert L. Deering has been appointed Assistant District Forester in charge of Operation in District 5, with headquarters in San Francisco. This choice once more illustrates D-3's "overflow" value, to speak in the technical language of game refuges: we have a good sprinkling of District Foresters and Assistant District Foresters scattered in various Districts. We hate to part with Deering, but his ability, training, and experience - as Forest Assistant, Deputy Supervisor, Assistant and Acting Chief of Operation, Supervisor, and Captain in overseas service with the Forest Regiment - give him excellent qualifications for an unusually attractive and responsible job.

The Lincoln has just completed another successful prosecution of a game law violation. Dale Kreigh and another person were charged with killing seven young turkeys last July. Rather than stand prosecution, Kreigh has recently entered a plea of guilty before the Assistant District Attorney and paid a fine of $50.00 and costs. The other defendant is out of the State but will be prosecuted on his return. At our request, the State Game Warden actively assisted in handling the case.

The Lincoln Forest has been exceedingly active and successful in the enforcement of the game laws. Some Forest officers regard this activity as a side issue; but the mere legal technicality which presumably places the game within the National Forests under the jurisdiction of the State does not abate our real interest in game protection. Now that the fishing season is open, why can not all Forest officers become active instead of remaining passive in enforcing the law? The Lincoln has set a pace which will be difficult to follow.

The Crook had a 1300-acre fire a few days ago. It started from a powder blast set off by the trail crew. A piece of burning fuse ignited the dry grass; and a high wind, combined with trouble in getting enough fire fighters, did the rest. The cost of suppression was about $1,200.

District 3 - Southwestern District (Cont'd)

"The Lincoln is trying out an experiment all its own in the prolongation of life of pine telephone poles. Trees of suitable size were selected during the pest winter by Ranger Felts and the bark removed from the ground up to about four feet. On the rising of the sap this spring and a thorough coating of the exposed part of the trees will be felled and dried and cut into suitable lengths after which they will be placed in locations where decay should be most rapid. It is felt that the experiment will show that the coating of resin will amply protect that portion in the ground from decay. If our expectations are realized the cost of telephone line construction should be greatly reduced on certain Forests."

-Lincoln Forest.

A recently completed game census for the Prescott Division of the Prescott Forest shows 1925 Blacktail Deer, 18 antelope, and 100 turkey. Old mountain sheep horns have also been found in the Bradshaw mountains on the south end of the Prescott Division by Ranger Taliaferro.

District 4 - Intermountain District

On May 10, Ranger Nelson had his appendix removed at the hospital in Idaho Falls. He had a rather severe time, but is now back at his station and is getting along as well as may be expected. The doctor has advised him that it will be necessary to ride only gentle horses for a period of a month or so.

- Caribou Forest.

The Supervisor's office is in receipt of a limited supply of wild sweet pea plant from Ranger Butler. Mr. Butler states that this plant is peculiar to the famous tea and Scoonover water. The perfume is of such a sort that it is reputed to drive a snake off of a 640 H.E. There is about one acre of these plants on top of a mountain on Ranger Butler's district, and they are said to be the only ones except in lower China and Ireland.

- Humboldt Forest.

Mr. Kneipp recently spent a day and a half at the Government Sheep Breeding Experiment Station near the Targhee Forest. He says that at this Station they are conducting some very interesting and profitable work in developing types of sheep best adapted to the Intermountain range conditions and in securing dependable data with reference to breeding, wool and mutton production, and methods of feeding and handling sheep. While the stockgrowers in that vicinity are beginning to express the desire for more rain, the range appears to be in very good condition with a great deal of snow still laying at the higher elevations. Ranger Forest Steele, whom Mr. Kneipp met on the trip, expressed the optimistic hope that the fire season this year would be subnormal and would interfere little, if at all, with the administrative work of the Forest.

Sometime ago we suggested to the Forester that an effort be made to secure the cooperation of some of the large tobacco manufacturers and distributors in fire prevention work, urging them to incorporate in their advertising material suitable precautionary slogans advocating care with fire generally and in the Forests particularly. We have recently been advised by the Forester that the Secretary of Agriculture has taken up this suggestion with seven of the largest tobacco manufacturers in the United States and it is quite possible that some effective results will be secured.

District 4 - Intermountain District (Cont'd)

Messrs. Nelson and Woods returned last night from a 20-day trip over the spring ranges on the Uinta and Wasatch. They found that the season is generally from two to three weeks later than the average. On some of the spring areas a very high degree of efficiency is being had in the handling of stock. On several of the areas a very poor handling was found to be the rule.

The indications are that this will be a very good year for forage growth.

The tentative allotment received from the Forests for 1921 is necessitating a great deal of frenzied finance on the part of the District Forester and the Chief of Operation, who are exhausting their ingenuity in making the limited funds, due to curtailment of appropriations, meet the needs of the District. It now appears that we will be able to get by without sacrificing any vitally important activity, but the majority of the Supervisors should prepare themselves for painful surprises upon receipt of their allotment sheets.

Ranger Butler's Fire Prevention Campaign

We are quoting below Ranger Butler's own story of his fire prevention campaign: Moral - Use Tact.

"We tried to make the fire campaign a success on this district but were somewhat handicapped on account of time. The first school visited, we got up to speak (the teacher was an old maid) and started by saying, 'We are living at a great age,' the teacher thought we were alluding to her age and was quite sulky through the whole performance. Not being easily discouraged, we tackled the second school. Here we met a young lady who had traveled from Maine to California and is a dear lover of trees; arrived at the school during the afternoon recess (wish it had been the forenoon). We suggested that she dismiss the scholars, while we got organized for the following day, so home they went while the teacher and I got up a program, having worked like beavers until 7 p.m., but it was well worth the time to see her trying to instill in the kiddies the next day, the great loss caused by fire and the danger of fire.

"We tackled the third school with pretty cold feet, but concluded to use more tact than at the first one as there was an old maid teacher there that it was said no man had ever been inside of the door of her school and was said to be a man hater. When she opened the door I stuck my foot in between the door and the jamb, got my corns pinched a little but said, 'Young lady, I would like to come in and address the school,' here of course explaining my business. She invited me in and we got into a conversation, she made a remark about when I graduated (being on my guard, right here was where I capped the climax) and said, 'You know two or three years can make quite a change.'. If I had told the truth, I would have said at least twenty or thirty years can make quite a change, but the two or three years did it; she dismissed the school, invited me to stay to lunch and turned the school over to me in the afternoon."

- Humboldt.

Mr. David Barney, a permittee on Ranger District No. 8 of this Forest, lost 54 head of cattle in about twenty-four hours after turning them on the Milk Creek Allotment, from larkspur poisoning. Mr. Barney had a permit for 300 cattle on this allotment and the stock were turned on the range when the grass was rather short, owing to the scarcity of hay. Evidently the cattle were thin, and after a scarcity of other feed fed heavily on the larkspur which was more advanced than other feed on the allotment. This is the first loss from larkspur poisoning that we have known on this allotment.

- Targhee.

District 5 - California District

The first stage of the San Joaquin insect control project on the Sierra has been completed. The over-wintering infestation below the 5,000 feet level has been treated. The infestation was found to be light. About 400 trees have been treated according to the usual method employed in spring work. The cost of the work will probably be rather excessive on account of unfavorable climatic conditions, high wages, and the scattered condition of the infestation. From now on, during the summer of this year, a new system of insect control will be instituted. Two 2-men crews will be employed. The infested trees discovered will be treated by peeling the bark and exposing it to the sun without burning. Assistant Entomologist J. M. Miller has discovered that the heat of the sun is practically as effective in killing the broods as fire. This is a big discovery, since it will lead to economies in this work as it can be carried on more economically during the summer months than during the fall and spring when we have unfavorable weather conditions to contend with. The use of trap trees will also be experimented with in this connection. On account of the lack of funds it is not probable that we shall employ a Forest Entomologist during the coming season. It is hoped that we can arrange with Mr. Miller to take care of the essential examinations on the Santa Barbara, Modoc, Trinity, Lassen, and Plumas Forests.

Private Forestry - A Practical Application: By E. F. Smith

A short time ago an owner of private timberland within the Eldorado National Forest sold his holdings, or rather the timber on such holdings, to a milling outfit. He called at this office and inquired of the Supervisor if he could obtain a copy of the Forest Service contract on sales of from 5 to 10 million board feet. I showed him a form of contract and he inquired if I could write him one, inserting the words "owner of timber" where the words "Forest Service" or "Forester" or "Forest Supervisor" occurred in the original. I gladly offered to help him with the idea and the result was that this office worked up a complete timber sale contract with every stipulation that the Forest Service contract calls for, with one exception, and that was that the stumpage price of timber should be adjusted at the end of each year to coincide with the prices then prevailing for timber of the same species on the Eldorado National Forest. The beautiful part of the whole thing is that the millman accepted and signed the contract, which I think goes to show that a few men are beginning to appreciate the fact that our methods of handling timber sales are really an advantage.

In making out this contract I kept an extra copy and I am ready for the next "bird" that appears.

The District Office will be moved on June 26 to the Ferry Building. After several months' strenuous effort to locate new quarters, following a notification that a prohibitive rental would be charged for the present quarters after July 1, we were lucky enough to complete negotiations for the occupancy of space in the Ferry Building, and we should be fully installed there by July 1.

From a publicity standpoint, this is probably as fine a headquarters for a District Office as we have anywhere in the Service. Furthermore, it is exceedingly handy to all those who live in the trans-Bay regions.--P.G.R.

Saturday, May 29, was set by Ranger Johnson of the Modoc as the day for the people of Cedarville and vicinity to turn out and clean up the public camp and picnic grounds in Smalls Canyon. The site, timber for improvements, tools with which to work, and $100.00 were the contributions promised by the Modoc.

Local people planned to be on hand in force, to clean the place up, repair the road, and erect tables, benches, etc. Picnic lunch was to be served by the ladies, and the campground was to be ready for occupancy on Decoration Day.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

June 21, 1920.

Our Relations with the Men Who Leave

Not long ago a Forest Officer in the West in a personal letter took up the subject of our men leaving the Service, especially in the Branch of Grazing, and going either into the livestock business for which, of course, they are peculiarly well qualified, or else setting up a regular business of acting as attorneys for people who have cases before the Service in which they feel they have not received their full rights. "It seems to me," writes this man, "the Service is getting into a very dangerous position with so many of its old men leaving it and carrying with them information they have gained through their official positions, which they will be able to use against us if they so desire." He seemed really disturbed over the prospect.

Personally, I do not think we have anything to fear in this matter if the Service handles its correspondence and carries out its policies in a fair, honest way, which is the way we have always tried to do. As a matter of principle there should be nothing in our records which the public should not see if necessary. Naturally, if we have a trespass case against a man it would be inadvisable to let him know on what grounds we are basing our suit until such time as our evidence is all collected and the suit is presented in court. But so far as concerns appeals, which are being constantly made to the Forester and Secretary from decisions made by the supervisors and District Foresters, we surely should have in the correspondence nothing to hide and nothing to blush for. If there is, then it is our fault and we have not played the game along the right lines. No proposition should be put up to any permittee which is not in itself fair and square in every way. No statements should be made in letters which are not founded on facts. Nothing should be said in an official letter which can not be shown to any person interested, whether he be friend or foe. It is not always wise, however, to tell everything one knows to even his best friend- "friend wife" not excepted.

Naturally here and there a letter will be written in which the language used or the expressions employed might have been better constructed and are perhaps susceptible of a different reading than that which the writer meant they should have. This, of course, is a matter of education, temperament and good judgment. With the best possible intentions all of us write letters occasionally which contain sentences that might well have been left out. Nevertheless, as a general broad principle, I can not agree that there is anything dangerous to us or that we are going to suffer from these men leaving the Service so far as their future action toward us is concerned.

On the other hand I think we should feel they are in a position to help us very materially, for their knowledge of our work, if it has been done on the lines herein outlined, should make them respect, rather than suspect us. Moreover, we must remember that the men who are leaving the Service for wider and more profitable fields are pick-

Our Relations withtthe Men Who Leave. Con't.

ed men, selected as a rule because they stand out above the rest of the bunch. They are thoroughbreds in every sense. The buyers always cut the scrubs back when they see the herd. I don't believe, therefore, that any man who has spent 10 or 12 years in the atmosphere of this Service with its high ideals and clear cut public spirited principles is very likely when he leaves us to so far forget his training and associations in the Service as to "do us dirt."

Will C. Barnes.

District Office Overhead

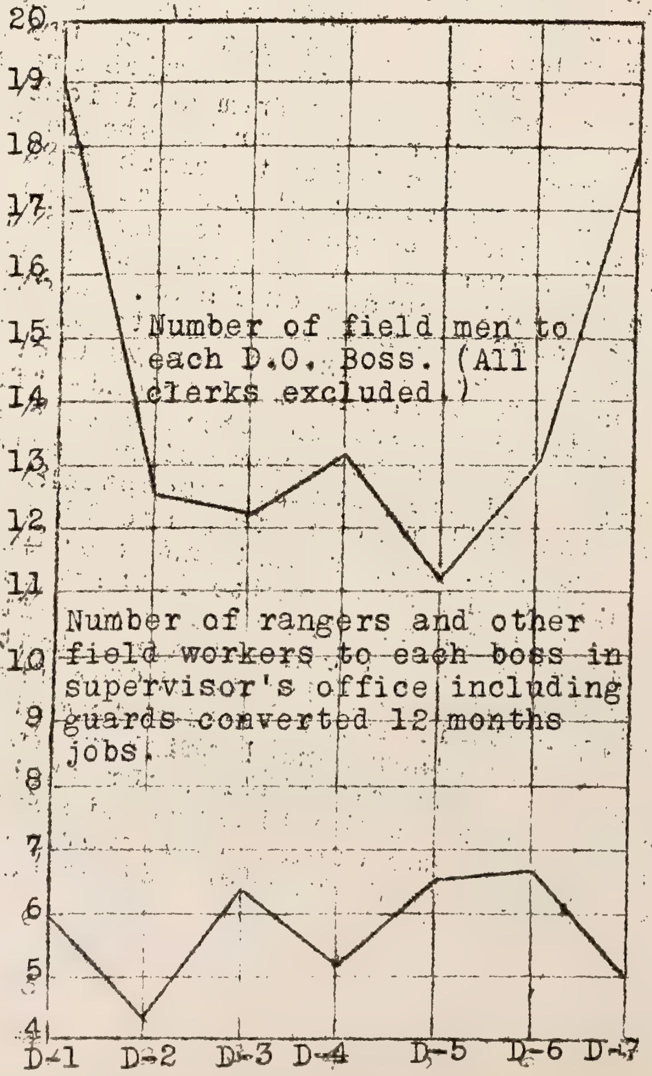
In answering Mr. Benedict's article in last week's Bulletin, we would like to keep the discussion as far away from home as we can as long as it is possible to do so. As food for further thought, therefore, we are submitting a diagram showing overhead in the Districts and on the Forests.

Note that District 1 takes the world's prize for number (19) of field men to each District office boss. District 7 is in second place, while District 5 gets the booby prize.

District 6 has the largest number of field men for each boss in the Supervisors' offices. District 5 is next, while District 2 brings up the rear.

But will the gentleman from California tell us whether he considers 6½ to 1 (as in California) a proper ratio between rangers, guards, etc., and Supervisor's office force? Has Mr. Benedict really removed the beam from his own overhead before calling attention to the mote in that of the District and Washington offices?

-- The Branch of Operation.



Water Power Bill Signed

At the eleventh hour, the Water Power Bill was signed, thereby escaping a pocket-veto and becoming a law, much to the satisfaction of those who have worked for its passage for the past 10 years.

In a later issue the Bulletin hopes to have the important features of the Act and their bearing on water power developments explained by O. C. Merrill, who probably knows more about the ins and outs of the whole matter than anybody else in the country.

The Agricultural Editors Look Us Over

A committee from the American Agricultural Editors Association which has been in session in Washington for the past few days visited the Forest Service on June 18 and spent sometime in getting acquainted with members of the office and the detail of our work. The various activities of the Service were gone into and the purpose and methods of the organization were explained. The committee proved to be well informed on forestry and anxious to give constructive suggestions. Their main criticism was that the Service is not doing enough to help the farmer in handling his woodlands. This is a point which all of us appreciate and which we are anxious to remedy but one which requires more funds than are at present available.

The only drawback to the inspection, from our standpoint, was that the committee had only a short time to give us and could consequently hit only the high spots. Memoranda dealing with the work and organization of the different branches were furnished, however, and we hope that a better knowledge of the work of the Service will result from the inspection.

The visit was a part of the plan of Secretary Meredith for "selling the Department." Similar committees visited all bureaus and later reported to the Association on their findings and made suggestions in regard to methods by which the work of the Department could be made of the greatest value to the farmers. The members of the committee which visited the Forest Service were up on their toes and wide awake. If they are a fair sample of the membership of the association the average must be pretty high.

"The Weekly News Letter - Rural Redneck Edition"

"Published fearlessly, without authority and as complimentary as possible to the American Agricultural Editors' Association."

Forest Service, Please

"Hello, Forest Service, give me Colonel Greeley, please."

"Colonel Greeley is in, but he's very busy with the report on the Capper Resolution. Will you call later, please?"

"All right, give me Mr. Sherman, I want to--"

"I'm very sorry, but Mr. Sherman is at his home working on the Capper Resolution Report."

"Well, then, let me have Mr. Clapp. It's important that--"

"Sorry, but Mr. Clapp's telephone is disconnected. He's worki on the Capper Resolution."

"Give me Mr. Zon, then, I can't wait--"

"Mr. Zon is not seeing anyone. He's working on the Capper--"

"Herbert Smith will do, I've got to talk with--"

"Mr. Smith asked me not to call him today. He's working on th

"Say, wait a minute! Is this the Forest Service or Senator Capper's office?"

"I don't know."

"Well, give me the messenger boy, I'll leave a message for--"

"The messenger boy has just been taken to the hospital. He let the first draft of the Capper Resolution fall on his--"

"Good-bye!"

Receipts Show Gain

The statement of receipts up to May 30, 1920, shows a net gain of $255,790,64 over a similar period for 1919. All District with the exception of 1 and 4 showed an increase.

The most striking thing about the statement is the decrease of $222,362 from Grazing. The receipts for the month of May, during which payment of grazing fees is ordinarily heavy, were $42, 076,05 less than for May, 1919.

Several explanations are advanced by the Branch of Grazing for the falling off in receipts. In some portions of the West heavy losses were sustained during the past winter and considera numbers of stock were shipped out on account of shortage of feed. Many permittees find it necessary each year to borrow money from the banks in order to pay their grazing fees. On account of the general shortage of money these banks have been loath to make loans much in advance of the time when the stock were actually placed upon the range. Grazing thinks it entirely probable that during June the grazing fees will be paid by a number of permittees who are at present delinquent due to the attitude on the part of the banks.

Headley Gets a New Job

Mr. Headley has been appointed by the Secretary as a member of the Departmental Advisory Committee on Finance and Business Methods. This committee is the outfit which is responsible for the promulgation of the fiscal regulations. In spite of the general belief that the fiscal regulations are for the purpose of preventing instead of expediting reimbursement of expense accoun it is reliably reported that the Advisory Committee is anxious t find ways of adapting said regulations to the actual need of the field service.

Mr. Headley has been requested to submit a memorandum of changes in procedure which would be beneficial to the Forest Service and suitable to the field services of the other Bureaus. He will be glad to get recommendations, supported by appropriate data, in regard to possible changes in the fiscal regulations. This opens up the way for everybody who has had trouble in gettin expense accounts paid to make themselves heard. If Mr. Headley can secure the adoption of changes to the regulations that will make it possible for the average man to get back an appreciable part of an expense account, he will win the undying gratitude of the entire Service.

Proposed Organization for Making Tropical Investigations

The Division of Biology and Agriculture of the National Research Council has started a movement for the organization of an institute of biological research in the tropics and has requested the cooperation of the Department of Agriculture to this end. From work alre done by the National Research Council, it is stated that an understanding of the potential resources in plant and animal life of the American tropics is of the greatest importance scientifically and commercially to this country. The establishment of connections between the scientific men of the United States and those of our southern neighbors would be of great value in developing better social and business relations between the countries of North and South America.

All institutions which are interested in inaugurating a system of explorations and laboratory studies in tropical South America have been invited to send representatives to a meeting in Washington to discuss plans.

Use the Department Form

In the examination of telegraph accounts for service in the field, it is found that a very considerable number of messages are written on commercial forms, and in many cases no identifying marks are placed on them to show where bills should be sent. This results in unnecessary handling of accounts by the various offices in attempting to locate the proper paying office. To obviate this condition all Forest Officers should provide themselves with pocket size books of telegraph forms - Form E-1, or loose forms specially prepared for the Service. It will save the time of the user, and aid the accounting offices of the telegraph companies, as well as the auditor in this office.

Fagan.

Would Preserve Wonders of Okefinokee Swamp

Okefinokee Swamp, "with no counterpart anywhere in the world, and containing numerous features of extraordinary interest which call for permanent national preservation," according to the Biological Survey is threatened by commercial exploitation which will destroy its primeval conditions and remove the last of the three great swamps of the Atlantic seaboard.

Attention to the danger confronting this "greatest natural wonder" of Georgia is called by a writer of the Biological Survey, in Natural History (the Journal of the American Museum of Natural History). He states, however, that the Okefinokee Society, which was organized in 1918 through local sentiment in Waycross, Ga., a city near the swamp, is taking steps to preserve the region for posterity. The Okefinokee Society, which is prepared to undertake the raising of private funds, plans, after securing the area for a reservation, to present it to the United States Government in order that it may be administered and perpetuated as a national wild-life refuge.

The Okefinokee covers nearly 700 square miles in the southeastern part of Georgia. "Among the fresh-water swamps east of the Mississip says the Biological Survey writer, "it is exceeded in size only by th Everglades, and in the richness of its historical and literary associations, in the marvelous beauty and charm of its diversified scenery, and in its extraordinary interest as a faunal and floral area, Okefi okee Swamp is unique. It has no counterpart anywhere in the world.

"There are several respects in which the swamp would make a particularly useful and valuable reservation under Federal or other auspices. It is a refuge for some exceptionally rare and interesting forms of animal life. It is an important wintering ground for large numbers of migratory waterfowl. It still contains, in spite of extensive lumbering operations, some five hundred square miles of diversified territory in an absolutely primeval state, offering to naturalists unsurpassed opportunities for faunal and ecological studies. Moreover, it has a distinct esthetic value, the extraordinary beauty of its scenery making a strong appeal to all lovers of nature who have been privileged to visit the region."

While the Okefinokee has enjoyed historical and literary renown for over a century, its biological features have been systematically investigated by men of scientific training only within a comparatively few years. These men believe that in the eastern United States there is no area of equal extent which affords such exceptional opportunit for the study of animal life in a primeval environment. With the rapid destruction of natural conditions over the entire country, they say it is of the utmost importance from the standpoint of science that at least a few areas here and there be preserved in their original state.

There are probably between 100 and 200 black bears in its swamp and immediate environments. Other animals that have been noted in the region are Florida deer, Florida otters, panthers, Florida wolves, alligators, wildcats, raccoons, opossums, and skunks, as well as numerous rare and interesting species of fish and fowl.

"The wonderfully rich and diverse plant life of the Okefinokee," it is recorded, "constitutes one of its greatest charms and beauties. And herein one may perceive a veritable illustration of the 'curse of beauty'; for it is the magnificent timber of the swamp that furnishes its commercial value and has invited destructive exploitation '

Articles Approved for Publication during April and May

	Author	Written for
Forests as a Farm Crop	W. N. Sparhawk (For signature of Secretary)	American Forestry
Box Design and the Forest Products Laboratory Tests for Boxes	T. R. C. Wilson	West Coast Lumberman

	Author	Written for
Drying Lumber by Means of Superheated Steam	H. D. Tiemann	Lumber trade Journals
The Forestry of the Prophets	Aldo Leopold	Journal of Forestry
Forestry Movement of the Seventies, in the Interior Department, under Schurz	Jeannie S. Peyton	Journal of Forestry
Opportunities in Forest Research	Samuel T. Dana	Cornell Forester
Feeding Fire Fighters	W. I. Hutchinson	Popular Science (Personal)
To Let -- 10,000 Summer-Home Sites	W. I. Hutchinson	Outer's Recreation (Personal)
Forest Devastation -- A National Evil, and Its Remedy	W. B. Greeley	Independent
Rebuilding the Old Mullan Road	M. H. Wolff	Some road magazine
A New Road to an old Wonderland	William R. Fraser	" "
Timber Conservation in Wyoming	Quincy R. Craft	American Forestry
Forest Service Investigations of Interest to the Naval Stores Industry	Dr. L. F. Hawley	Naval Stores Review
Effect of a Late Spring upon Forest Vegetation in the Wasatch Mountains of Utah	C. F. Korstian	Ecology
Comments on the Forestry Program	E. C. Shephard	Journal of Forest
Notes on Trees and Shrubs	W. W. Ashe	Bulletin of the Torrey Botanical Club
Research and Boards	O. M. Butler	Trade journals
Timber Conservation in Wyoming	Quincy R. Craft	American Forestry
How Shall We Solve the Waste Problem?	Geo. M. Hunt	Trade journals
Will Sodium Fluoride Come Into General Use for Preserving Wood?	Geo. M. Hunt	Trade journals

Death of Guy T. Trembley

Guy T. Trembley, draftsman in the Branch of Engineering, died on June 17 after an illness of several weeks. Mr. Trembley had not been in good health for some time, and about Decoration Day suffered a nervous breakdown, which brought on other complications.

He was a man of fine natural instincts and possessed a high sense of honor. He had been employed by the Forest Service for more than 13 years and was perhaps the best penman we have ever had. His work on maps for District 1 was particularly well known. He was unmarried.

Washington Notes

News has been received that on June 3 the University of Toronto conferred the honorary degree of Doctor of Laws upon Dr. B.E.Fernow.

Col. Greeley left om June 20 for a field trip of about two months, during which time he expects to spend about two weeks with Chairman Haugen in a general inspection of the National Forests in Districts 4 and 6. He will also spend several weeks in Alaska.

District 1 - Northern District

Last fall the Forest Service was requested to aid a number of farmers living in Hangman Valley, just north of the Palouse Division of the St. Joe Forest, in disposing of a considerable amount of timber on their claims. It developed that there were approximately 200 settlers who owned a total of about 300 million feet of timber, which they desired to dispose of as a unit in order to attract some company capable of handling the entire proposition. They were, however, unable to agree upon a satisfactory price. The project had been worked up by F. I. Rockwell, a former Forest Service man, the local county agent from whom the request for help came.

The Forest Service agreed to make an appraisal of the timber and to assist in drawing up a contract and sale conditions. The appraisal was made this spring and a price fixed of about $3.50 per M feet. Although the land is well adapted to agriculture, it will not be possible for the owners to put all of it into cultivation for a number of years. Consequently it will be to their advantage to devote it to growing timber until such time as it is needed for raising crops. The stand consists of yellow pine of a good quality and contains a large number of trees just below merchantable size which will make rapid growth when the old timber is removed. It is distinctly a case where it will pay the farmers to grow trees. These facts were explained to the members pf the association and they were quick to see the advantage to them.of handling the forest in the manner recommended. In order to save the young growth they agreed t to sacrifice 30 cents per M on the stumpage price. The contract and conditions of sale are now being drawn up and it is expected that the timber will be advertised in the near future.

This is one of the first instances in this District where the Forest Service has been able to extend material assistance to farmers and the chance to do so has been welcomed. It is hoped that the demonstration of the practicability of applying forestry to farm woodlands will lead other owners to adopt Forest Service methods. Much credit is due to the local county agent for working up the project.

Forest Products Laboratory Notes

Prayer of a Laboratory Kiln Operator in the Field:- "Oh blssed are the kilns at Madison for they are of the F.P.L. Tho they be hotter than h--- there is a shower which cleanses. Tho they be of the water spray yet will they dry wood. Tho their valves be many and their thermostats costly yet their circulation is constant and the temperature controlled. By their steam jets they relieve casehardening and by their water sprays they stop honeycombing. Yea, tho I may bark my scalp on a sticker, I fall not upon hot pipes where I burn a scorch. Yea verily I say they are of the F.P.L. which liveth forever. Amen."

Mr. Loughborough, Section of Timber Tests has returned from his visit to Indianapolis and Brazil, Indiana. One interesting thing he learned while away was that the Stock Furniture Company at Brazil was saving $300 a kiln-run on gum and walnut through information th one of their men got from two visits at the laboratory.

Announcements recently made in the press tell of the organizatio of two large airplane transportation companies. One of these will do a general passenger business over short routes in the Middle West, while the other intends running a line of giant airplanes from New York to the coast with ten trunk lines operating from the Grand Trunk and expects to do a general express and mail business.

- Air Service Bulletin.

In figures recently compiled by W. C. Hull, of Tupper Lake, N.Y., it is estimated that something like 20,000,000 feet of lumber is consumed annually in the manufacture of clothespins. It is also stated that there has been no improvement for forty years in the art of manufacturing this useful household article.

Dr. Kress and Mr. Humphrey have returned from a trip through Wisconsin and the Lake states studying the conditions of storage of pulpwood and groundwood in the paper mills in these sections.

M. A. Grainger, Chief Forester of British Columbia, spent a few days at the laboratory recently. He is on his way to London to attend a conference of foresters of the British Empire. The object of this conference is to discuss policies of forestry and general conservation of natural resources in the British Empire. Mr. Grainger's interest here was in learning of the suitability of the woods in his section for pulp and paper and other uses.

A.K. Armstrong, a former member of the Section of Timber Mechanics, has returned to the laboratory where he will be in charge of the box testing work. He left here in January 1918, to go with the American Bureau of Shipping, where he was in charge of wooden ship construction and was Assistant to the Chief Surveyor.

Exclusive of "Operation," which includes many sections, the section of Pulp and Paper took the lead in correspondence during May having received 262 letters. Preservation comes in second with 203.

Van Alphen de Veer, Chemical Engineer of the Laboratory for Testing Materials, Weltevreden, Dutch East Indies, was a recent guest at the laboratory. He was particularly interested in the timber testing work.

District 2 - Rocky Mountain District

Frank H. Culley, head of the Department of Landscape Architecture at the Iowa State College, Ames Iowa, and two students have been secured to work on the plans of the San Isabel this summer. This was made possible through the cooperation of the San Isabel Public Recreation Association of Pueblo. Mr. Culley has the distinction of offering the first course in recreational landscape design in any school of landscape architecture in the United States. His work and study in District 2, during the coming season, looks forward to the thorough organization of a course in recreational design which will be planned to train men for the position of recreation engineer in the Forest Service and to supply the demand for men with this landscape training in National, State, and other large recreational systems.

On June 5, a camp was established on the San Isabel Forest, whi so far as is known, is the first improvement camp working exclusive on recreational design of construction in the Forest Service.

One hundred and sixty-nine acres were planted on the Michiga Forest this spring with two-year Norway pine seedlings shipped from the Cass Lake Nursery. An average of 2,252 trees per man per day were planted. The cost of the operation was $5.38 per acre, including the cost of seedlings of which 850 were planted to the acre. All of the seedlings available for planting at the Beal Nursery wer set out last fall. The total area reforested on the Michigan this fiscal year amounts to 420 acres. The planting funds became exhaust with 30,000 trees on hand and no chance of securing an increase. Despite the fact that the fire season was at hand and there was a large amount of district ranger work to do, Ranger Johnson and his guard completed the planting unassisted. That's the Forest Service spirit for overcoming handicaps.

Posters on beaver board, 4 by 6 feet in size, attractive with landscape painting and bearing the slogan "Protect Colorado's Forests have been erected at the McFarland gateways to the Golden and Bear Creek entrances to the Denver Mountain Park, where one of them must be read by every person making the Lookout Mountain trip whether begun by the way of Golden or Morrison. The handsome posters are th work of Miss Helen Dow, the Fire Lookout at Devil's Head.

Assistant District Forester Fred Morrell has just returned from detail in the Washington office. On his way home, he stopped off at the Iowa State College, Ames, Iowa, where the degree of Master of Forestry was conferred upon him.

The opening of the mountain passes is later than usual this ye Word has been received only recently that the Berthoud Pass road is open to automobile traffic.

The new road from Nederland to Ward, in the Colorado National Forest, built by the Bureau of Public Roads last year, was opened o June 9.

On June 8, 38 fires were set along the Moffat Road right of way on the Colorado Forest. These were evidently started by a single train. The matter has been taken up with the railroad company to prevent a recurrence. This starts off the fire season in District 2 with a bound.

An agreement providing for the cooperation in Game and Fish matters as they relate to the Michigan National Forest has been e ecuted by the District Forester and the Game, Fish and Forest Fire Department of the Public Domain Commission, State of Michigan. Th agreement is along the line of similar agreements already in effec between the District Forester and the States of Colorado, Wyoming, and South Dakota.

District 3 - Southwestern District

Nothing short of having an airplane available will enable any friendly competing officer in this District to beat the elapsed time of Deputy Supervisor McKenzie's (Coconino) latest fire case. It will be recalled that McKenzie's first successful case some weeks ago, based on a laundry marked handkerchief, took 27 hours from the reporting of the fire to the paying of the fine in a Justice-of-the-Peace court in Flagstaff. This time seems an age compared with the new record, namely, four hoursfrom reporting of the fire to the return of the guilty party to the fire line of his own fire with the apprehension, arrest, trial and fine in between. Tactics similar to those used by the famous arson squad produced the results in this case. Investigation of the burned area disclosed an abandoned camp fire, hob-nailed tracks, a bar of soap with certain finger marks, and a dish rag. The evidence pointed to a Mexican sheep herder working on the fire line. His confession followed, and after a guard was placed on his sheep he was taken to Flagstaff for trial. A fine and suspended jail sentence, together with a severe warning, resulted. In addition, the defendant was put on patrol of the fire line for the night.

A twig disease of the western yellow pine discovered on the Prescott is at present under investigation by Dr. Long, the district consulting pathologist. Samples of this disease have recently been furnished by the Prescott officers for study. Trees affected with the disease are readily recognized from a distance through the bundles of dead leaves they carry or by entire small limbs bearing brown needles.

The Los Alamos Ranch on the Jemez, of which ex-Ranger A. J. Connell is manager, is working a unique plan for inducing small stockmen in their neighborhood to run better bulls. They make a standing offer to trade their young Hereford bulls, even money, for anything on four legs, regardless of race, color, or previous condition of servitude. Anything with horns on it buys a Los Alamos bull, and considering the quality of most of the native sires, the trade is eventually a benefit to all concerned.

How are you using your field glasses? There is a right and wrong way. We can well profit from the Army instructions to observers, which are very rigid. The wrong way is to "glue your eyes" to the glasses and gaze through them continuously for several minutes. This tends to set the eye muscles at an unnatural focus which tires the eyes quickly and, if continued, may result in permanent eye injury. The right way is to look through the glasses for only a few seconds at a time, look aside for a few moments to rest the eyes - then take another look. Try it! See any difference?

One cattle buyer in Arizona is staying with his contracts and furnishing an example of business integrity that is inspiring in the midst of a wave of forfeiting of contracts that is decidedly painful to cattle raisers. Although facing a loss of about $100,000, Degen Brothers, of Denver, are shipping over 15,000 head from southern Arizona bought at $5.00 above present market prices.

The grazing assistant examination given in April was successfully passed by all men on the grazing reconnaissance crew now in the field, according news just received from Washington. The prospective grazing assistants are Messrs. Culley, Cassidy, and Marlowe.

The Arizona Daily Star of Tucson in a recent editorial suggests a fire prevention week multiplied by 52. Exactly so.

Supervisor Loveridge has been elected President of the Taos Chamber of Commerce.

District 3 - Southwestern District (Cont'd)

Ministers of the Gospel were among those whose aid was sought in District 6 to spread the gospel of forest fire prevention during Forest Protection Week. One parson wrote back to the District Forester entreating him not to "sin against God again in this way. If we go much further," he continued, "in provoking His wrath, He may send lightning enough to burn up all our forests."

It is unknown to the Editor whether there has yet been any marked increase in lightning fires in D-6, but if so, should they perhaps be classed as "incendiary" rather than "lightning"?

One crew of 15 Pueblo Indians has been working for the past week on the Pueblo Canyon-Red River trail. The 35 miles of the project however are located in such difficult country that in order to complete the work this season a second crew will start near the Red River terminus. This trail, which goes over Old Mike, Wheelers Peak, and Gold Hill, and for several miles traverses country over 13,000 feet in elevation will split the Taos Division north and south.

Ranger T. J. Ground is welcomed back to the San Antone after three months leave during which he flirted dangerously with pneumonia and spinal meningitis. R. L. Ground, who has been handling the San Antone recently returned to the Jicarilla. - Carson.

District 4 - Intermountain District

In connection with the Fire Prevention campaign six moving picture theatres have agreed to show the Forest Service cartoon slides; twenty-eight business houses in Salt Lake are now displaying fire posters. Many of the Scoutmasters are assisting materially in this campaign. Each Scoutmaster was sent a letter telling him that he would be furnished with a Forest map provided 50% of his troop informed another boy, not a Scout, of the danger of being careless with fire. Interesting letters are being received from these Scoutmasters; some of them are reporting 100% instead of 50% of their boys taking part in the campaign. One Scoutmaster stated that it brought him in three new Scouts. Another says, "What aid we are able to give will not end with this." - Wasatch.

As per schedule, the much advertised and discussed horse roundup was started from Austin, Nevada, on the morning of June 1, Rangers McDougall, Schoeller, Stockbridge, and Supervisor McGowan being present. The regular permittees on this range in nearly every case had two or three men riding and the job was completed two or three days earlier than we expected. We believe that we made a 90% clean-up on the job. At the conclusion of the roundup the Forest Service had 35 head of unclaimed horses on hand. These horses were placed in pasture at owner's expense and the fact given all possible publicity. On June 8, the Supervisor advertised that he would have these horses in corrals at Dory's ranch and would be glad to make arrangements with owners or their representatives for settlements of trespass charges and damages. One of the local Indian chiefs with some of his assistants met with the Forest Supervisor, and after much discussion 29 of the 35 horses were turned over to him with the understanding that he be responsible for pasture bills and trespass charges. We still have a few horses unclaimed on hand and also a flock of small trespass cases covering from one horse up to eight or ten for nearly every horse owner in this section. We believe, however, that much good was accomplished. Many owners having small mustang ponies on the range are holding them or else making arrangements to clean them up and sell all the inferior stock to Petaluma chicken-feed mills. A buyer from that section is expected here in the near future. - Toiyabe.

The 71 Livestock Association, which is furnishing some $6,000 for the construction of the Elk Mountain Drift Fence, is showing a fine spirit of cooperation. Pending the construction of the fence, which will be about July 1, the permittees took it upon themselves to herd their stock away from the Forest until the opening of the grazing season on June 16. Each member agreed to guard a certain section of the Forest boundary, and the association charged him definitely with the responsibility of preventing any stock from entering the Forest over the section for which he is responsible. - Humboldt.

With deep regret announcement is made by the Office of Forest Management of Mr. Seerey's resignation as Logging Engineer. After completing his course in Trinity College, Dublin, in 1881, Mr. Seerey came to Canada and entered the lumber industry. He worked up through all the different grades until he became General Woods Superintendent for the Burlington Lumber Company, one of the largest companies in the Lakes States. His work in the woods took him into Canada, Michigan, Wisconsin, and Minnesota. In 1908 he entered the Forest Service at the earnest solicitation of Mr. Pinchot. Mr. Seerey has given efficient service, and his broad education and wide experience has been a big asset to the organization. It was largely due to his efforts and testimony that the principle of recovery of damages for reproduction destroyed by fire was established in the courts. We are mighty sorry to lose Mr. Seerey and wish him long life and happiness and success in whatever line of work he may see fit to engage.

We have received from the War Department a set of artillery harness, which will be gladly issued to any Ranger who thinks he can put it together. Believe us, it is some puzzle. - Uinta.

We are very much pleased with the results we have attained through contracts on our telephone maintenance. On the Little Lost River telephone line we have demonstrated that we can save at least 25 per cent by contracting the job of getting out juniper stubs and setting them. There is no difficulty in drawing up specifications which insure good work. Of course one can not tell whether the stubs have been set the required depth or not, but by pushing on the poles one can tell if they are solid enough. I can recommend the contract system to any Supervisor who has improvement work of this nature. - Lemhi.

Ranger Foster, while repairing the telephone line near Parker Mill, was caught in a snowslide which carried him down the mountainside several hundred feet, but the result was only a few minor bruises and a big scare. - Stanley R.S.

For the past several weeks our office has been besieged with applicants for jobs as fire fighters. When offered a position as guard or on improvement work they are not interested. Farmers say these laborers can not be induced to accept work on the ranches. We have been doing considerable thinking over this condition and are wondering if it prevails in other local labor supply centers. As yet the conditions in the Forest are safe against fire, but we can not help but wonder just what is going to happen when the dry season comes unless this loose labor is absorbed. - Payette.

North of Paradox, Colorado, on Rock Creek within one mile of the Forest boundary, the Luminous Radium Company operates in what is claimed to be the richest uranium deposit in the world.

Dr. Sampson has advised us that upon reaching the Alpine Station at the Great Basin Experiment Station he found that the concrete tank on Area A had been badly damaged by frost. He states that the tank was built of the best material obtainable and that the walls were 12" thick at the bottom and 8" thick at the top. All parts of the tank were well reinforced with wire netting and heavily twisted and small iron rods, and it is estimated that it will require $400 to put the tank in usable condition.

A representative of the Biological Survey is in Yost organizing parties to poison ground squirrels. The poisoned grain is supplied by the Biological Survey, and the Clear Creek Livestock Association has volunteered to scatter it up the creeks. This should be most beneficial, both to the farmers and the stockmen. In the past, farmers have poisoned their ranches only to have the squirrels swarm down from the hills, while numerous reports have been received of squirrels taking a large part of the feed on certain watersheds.-Minidoka.

Telephone Engineer Adams arrived in Ogden last week from Missoula, Montana. He tells us that the new wireless equipment ordered from the General Electric Company for use on the Thunder Mountain Region is expected very soon.

A few days ago three members of the Indian Agency Office came into our office with the request that they be permitted to study our filing scheme and our general business system. It seems that recently they have had some man come into their office from the Forest Service who has more or less elaborated upon the business system of the Forest Service, and it is the desire of the Indian Department to adopt a system something like ours.- Ashley.

Through the efforts of the recently formed La Sal Mountains Fish & Game Association, 20 cans of brook trout fry are to be shipped by the Bureau of Fisheries for ultimate distribution in local streams. Because of the flood conditions prevailing at present it will not be possible to plant them in the streams immediately, but they will be placed in a temporary rearing pool and transplanted later in the season. - La Sal.

The Copper Creek Ranger Station is nearing completion and Ranger Wheeler contemplates moving into the bungalow in the near future. Thirty-five inhabitants of the Leesburg and Forney country assembled at the new station and gave the Ranger a genuine "housewarming." After dancing, songs, etc., a delicious lunch was served, and the Ranger, who is a bachelor, assures us that he has enough cake stored away to do him a month.- Salmon.

Exceeding any previously recorded high water mark by about one foot, the Grand River on the first of June made good the predictions issued by the Weather Bureau last winter to the effect that exceptionally high water would be experienced this spring. The river overflowed its banks in the lower part of Moab Valley and that end of the valley is one immense lake. Several hundred acres of land are covered by the backed-up water. Practically all of this land is in meadow and, therefore, the property damage will not be great in this vicinity. Undoubtedly, if the steel bridge across the river at Moab had not been raised four feet this spring, it would have been swept away. - La Sal.

The losses in livestock during the last winter and spring throughout this section of country have been something appalling. Conservatively estimated, 30 per cent of the cattle in this entire section, and probably 25 per cent of the sheep have died from cold and starvation. The prices of feed advanced to such a point that it made it entirely prohibitive to try to buy, besides the feed was not obtainable. The hay was all used up during the early part of the winter. Thousands of tons of grain were shipped in from Missouri River points, and even at that stock were so weak and the weather so severe that thousands of head of both sheep and cattle died after corn was being fed to them. The livestock situation generally looks very unpromising. After a long hard winter, with exceptional losses and the highest running expense that we have ever experienced, market prices are so low that the stockmen generally are holding on rather than disposing of their product and realizing their profits as usual. Probably none of the wool from this section of country has yet been sold and the best offers for it are around twenty-seven to thirty cents. The same condition applies to cattle. The market seems so far off that it is almost like sacrificing the stock entirely to sell at the present time, and the livestock men generally are facing a financial situation that is very embarrassing. We have quite a lot of delinquents who have not paid their grazing fees, and most of them are frankly making the statement that they simply have not the money. However, it is hoped that this condition will be somewhat offset by a good range year, a good lambing crop and a good calf crop. The weather conditions recently have been ideal and reports from the range indicate a good lambing crop and a good calf crop, although in this respect the stockmen are somewhat handicapped by the fact that they had to go on the lambing grounds before shearing which makes unusual handling and additional expense.

-- Ashley.

District 6.- North Pacific District.

Forest Examiner Charles J. Kraebel has resigned from the Forest Service to accept a job as Assistant Forester in the Division of Agriculture and Forestry, Hawaiian Islands, where C. S. Judd, formerly of Silviculture in D-6, is Superintendent of Forestry. Mr. Kraebel entered the Service in 1911, as Field Assistant on the Whitman, afterward being appointed Forest Ranger on the Oregon. He went to France in July, 1917, with Company B, 10th Engineers, spending two years in overseas service as second lieutenant in the 10th and 20th Engineers. Upon his return from France he was stationed at Wind River Experiment Station, as Forest Examiner, being especially interested in the arboretum and Douglas fir seed study, also actively cooperating with Dr. Hofmann in Douglas fir management study. Kraebel's resignation is greatly regretted by his many friends, who are mighty sorry to see him go but wish him every success in his new work.

Citizens of Eugene, Oregon, are going to help pay for local publication of the logs of McKenzie River Highway and Upper Willamette River road. These logs were prepared by N. F. Macduff, supervisor of the Cascade. The peolpe of Eugene evidently appreciate the value of these logs for tourist use and as good advertising for their country.

Grazing Examiners J. L. Peterson and D. C. Ingram report after an inspection trip in eastern and southern Oregon that the National Forest ranges there are in excellent condition, spring rains having averted the dry season threatened by the remarkably light snowfall of last winter. The coming grazing season bids fair to be the best in recent years.

Scaler Stephen A. Moore, of the Siskiyou, in charge of the C. A. Smith timber sale at Powers, Oregon, is taking advantage of an opportunity to put over some good educational work. There is at this camp a community hut, or entertainment hall, where movies, slides are displayed. Scaler Moore asked for a set of Forest Service sli

District 6 - North Pacific District (Cont'd)

which he will use in a short talk to the lumberjacks on forest protection and the work of the Forest Service.

Norman F. Coleman, president of the Four L's, called at the District Forester's office June 9 in the interest of cooperation between the Legion and the Service in providing entertainment in the way of subjects for discussion and debate at meetings in lumber camps. He was promised outlines for discussion of such subjects as fire protection, methods of Forest Service marking, felling of snag burning of slash, and other topics likely to interest loggers and lumberjacks, as well as a list of books and pamphlets on forestry which are available in the State Library.

At a meeting of the North Pacific Section of the Society of American Foresters held on June 1, announcement of the election of the following officers was made: Fred E. Ames, Chairman of Section; A. J. Jaenicke, Secretary and Treasurer; George W. Peavey, Dean of Forest School, Oregon Agricultural College, Member of Executive Council. At this meeting it was decided to give special attention during the coming year to the working out of a forest policy for the Northwest. Also the Reclassification Report was discussed and a committee appointed to act on the report in this District, composed of the regular officers of the Section, and M. L. Merritt, and J. D. Guthrie.

It is predicted that Supervisor Fromme will shortly be ready to take the Chautauqua stage. During the last two months he has given illustrated talks on game, game protection, and forestry before a number of organizations, and is scheduled to talk soon before the Klahhane Club and High School, Port Angeles, and several sportsmen's associations.

Forestry must be making progress. It is getting into political platforms this year on the Pacific coast. A candidate for Congress from Oregon came out advocating legislation requiring the planting of two trees for each one cut. A candidate for Governor of Washinghas this in his published platform:- "The timber industry, for instance, demands that there be established immediately a comprehensive reforesting program."

The Alaska Pulp and Paper Company of San Francisco, was the successful bidder for the recently advertised 100 million feet of pulwood timber on the Tongass Forest. The prices offered were $1 for Sitka spruce, western red cedar, and Alaska cypress, and 50 cents for other species. This timber covers about 10,000 acres on the Port Snettisham and Glass Peninsulas. The plans of the Company are to strat development of pulp plants very shortly, availing itself of water-power development it has already made in the region of the sale.

Preparations for starting the air patrol for this District on June 25 have been made possible by the cooperation of the State Forester's office. Present plans call for a base at Eugene, with sub-bases at Medford and Portland, with radio stations at Medford, Eugene, and Portland. Five qualified observers will be on duty at Eugene, one at Medford, four enlisted men at Portland, ten at Eugene and five at Medford.

District 7 - Eastern District

District Forester F. W. Reed is taking his vacation in the White Mountains and will not return to Washington until after July 4.

I. F. Eldredge has gone to Johnson City, Tenn., where he will mee District Forest Inspector Rhoades and Supervisors Russell and Spahr to discuss Forest plans. Mr. Rhoades has been on the White Top Forest during the past week looking over the areasdamaged by fire last spring, and discussing with Mr. Russell the fire protective scheme on the Forest.

WEEKLEY BULLETIN

Forest Service - Washington Office

(Not for Publication)

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June 28, 1920.

More Salaries Boosted

Another step forward in the readjustment of salaries has been made possible by the Secretary's approval of the Forester's recommendation for additional promotions to be made effective July 1. Following the February promotions on the Miscellaneous Roll, the Statutory promotions resulting from the transfer of a number of Supervisors to District Forest Inspectors and the promotion of 1,198 Supervisors, deputies, and rangers also on the Statutory Roll, the promotions now approved should make every man and woman in the organization realize that no effort is being spared to secure needed salary readjustments at every opportunity.

Total appropriations for the Forest Service		$8,285, 492
Total number of employees -		
Yearlong	2,700	
Temporary fire guards, etc.	2,000	4,700
Total number of employees promoted July 1, 1920		408
Total amount of promotions		$127,530
Per cent of total appropriation involved in promotions.		1½
Average basic increase per employee promoted		$ 310

To find the money for these promotions, surrounded as we are by rising costs of administration and increasing business has meant, and will continue to mean, an unprecedented exercise of skill and ingenuity in financial management. The men responsible for making Forest Service appropriations cover the work to be done must meet and solve problems the like of which they have never gone up against before.

Something more than skillful management is involved, however. The size of our force has been reduced, and rigid economies have been made in every direction. If the present policy of pushing salary adjustments at every opportunity is to be vindicated the cheerful support of the entire remaining personnel will be needed to enable the Forest Service to stop the gaps and meet the demands of the coming year.

It is fully recognized that there are some groups of Service employees who have not fared as well as others. Some groups are left to suffer more severely than others from the soaring cost of living. It is necessary, however, to recognize that we must pass through a trying period of readjustment, and that, if we wait until all salaries can be raised evenly together, we will still be waiting when the shrinking value of the dollar has driven the last employee to seek a living outside the Service.

The only practicable course is to make adjustments as rapidly as opportunities occur and to get the whole process over with in the shortest possible time. This will make severe demands on the good nature and loyalty of those individuals who do not happen to be among the first readjustments, but they have the assurance that no group is being forgotten and that complete readjustments will be pushed by every legitimate means within the Forester's reach. Before leaving for the field the Forester gave instructions to District Foresters and Branch chiefs to prepare appropriation estimates on the Reclassification Commission salary schedules except in a few cases. In carrying out the plans ahead of us success will depend not only on what the Forester does but on the backing he gets in one way or another from the men and women of the organization.

Tales of the Old Timers

Many of the Old Timers are leaving the Forest Service for other employment. Each year finds their number growing smaller. All of these men have knowledge of the unwritten history of the Forest Service which should be put on paper before it is too late. All of them perhaps without exception have had experiences which do not appear in the official record but which have an important place in the history of the Forest Service as indicating the caliber of the men who have made the Service what it is.

The Bulletin hopes to start publication, before very long, of a series of stories which will appear under the heading of this note. It desires to secure from the old timers themselves, and from the friends of the old timers, stories of the early days of the Service which illustrate the conditions under which the work was done, the obstacles which had to be overcome, and the spirit of the men in the organization. The stories should preferably be confined to about a page of the Bulletin but may exceed that length. Where possible the names and dates necessary to establish the reliability of the incidents reported should be given, but if for good reasons it is desirable not to make these known, they can be omitted if the author vouches for the story.

The purpose of the whole thing is to get on paper the innumerable incidents which have tested the mettle of men of the Forest Service from time to time. Probably every man in the organization knows of some incident regarding men in the Service which is well worth the telling. Stories of hardship, daring, perseverance in the face of odds, and quick-witted resourcefulness in meeting opposition are particularly desired.

Some day a history of the Forest Service is going to be written which will give all of the intimate details regarding the formation of the Service and the work of the men who started the ball rolling. The stories which it is hoped this request will bring in will be of inestimable value for such a book, as well as of interest to readers of the Bulletin. This request applies to every man and woman in the Service and those former employees who are now in other work.

What the Water-Power Bill Really Means

It is a long lane that has no turning. After twelve years of controversy and discussion a comprehensive water-power act has at last been passed and laws which long since outlived their usefulness have been repealed. The Conference report was adopted by the House May 4 by a vote of 259 to 30, and by the Senate on May 28 by a vote of 45 to 21. The President signed the bill on the 11th of June.

For ten years Congress endeavored to work out a scheme of Federal control over water powers which both houses could support, but without avail. By the end of 1917 the breach had widened rather than narrowed. It was at this time that the Administration stepped in with the proposal for a combination of all forces that were in favor of water-power legislation. A single bill covering all water-power matters within Federal jurisdiction and consolidating administrative control into a commission composed of the Secretaries of War, Interior, and Agriculture was presented. Although considerable opposition developed in Congress toward certain features of the bill, the combined support of the measure by the conservation interests, by the more liberal of the water-power and financial interests, and by the Administration resulted in its passage by the House and would have resulted in its passage by the Senate had it not been for a filibuster in the closing days of the session. The bill was immediately re-introduced into the Congress just ended and was passed by both Houses without any substantial alteration from the original draft. The legislation is recognized as one of the most important constructive measures of recent years.

Applications have already been filed through the Forest Service for more than one-half million horse power. Big developments will be undertaken in the near future in the East and South as well as in the West. The increasing cost of fuel and the difficulties of its

What the Water-Power Bill Really Means (Cont'd)

transportation have but a marked premium upon water powers. It is confidently expected that this legislation will mark the beginning of a new era in power development in the United States.

The Act applies to all power sites on the public lands and reservations and on the navigable waters of the United States including international boundary waters. The administration of the Act is to be through a commission composed of the Secretaries of War, Interior and Agriculture, who are to appoint an executive secretary, who presumably will have charge of the administration of the Act. The Act also provides that the work of the Commission shall be performed by and through the Departments of War, Interior, and Agriculture. It is probable that other language in the bill will make it possible for the Commission to employ such assistance as will be necessary in addition to the personnel already contained in the three Departments.

Under the provisions of the Act licenses may be issued for a period not exceeding 50 years, at the end of which time the United States will have the option either of purchasing the properties for itself, of allowing another to purchase them and issuing a license to him, or of issuing a new license to the old licensee. In case of purchase, whether by the United States or by others, the price is to consist of the net investment in the project plus severance damages. The net investment is to be the original cost of the property less the amounts held at the termination of the license in depreciation or amortization reserves.

The Act provides for regulation of rates, service and securities by the Federal Commission whenever the States have not agencies of their own with authority to act in these matters. Rental charges may be collected in an amount to be fixed by the Commission for the purpose (1) of reimbursing the United States for costs of administration, (2) for recompensing for the use of its lands and other property, and (3) for expropriating excessive profits.

The Commission is authorized to require the maintenance by licensees of a standard system of accounting, to require the proper maintenance of projects, the establishment of adequate depreciation reserves and the setting aside of a certain proportion of surplus earnings into sinking funds for the purpose of retiring a part of the capital investment.

The Commission is given broad authority to investigate not only individual projects for which applications are made to the Commission, but also "to collect and record data concerning the utilization of the water resources of any region to be developed, the water-power industry and its relation to other industries and to interstate or foreign commerce, and concerning the location, capacity, development costs, and relation to markets of power sites."

The Act also provides that when projects already constructed are brought under the provisions of the Act the properties affected by the license shall be valued and such value be taken as the net investment in the property as of the date of issuance of license.

O. C. Merrill.

Making the Service Safe for Decentralization

A plan providing for the transfer of property auditing from Ogden to the headquarters of the six western Districts has been worked out by Mr. Headley and Mr. Falck, following a thorough examination of our methods of property accounting. It is proposed to place the work under the Branch of Operation in the Districts. The auditing for the Washington office, District 7, and the Madison

Laboratory will be done at Washington. The eight statutory positions used by Mr. Falck at Ogden will be distributed as equitably as possible among the Districts. It is expected that the records can be shipped to the Districts on September 1, in order to get the work running smoothly there before the time for the annual inventory.

Little change is proposed in the property accountability instructions in the Manual except as required by the decentralization of the function of property audit. One entire set of records, hitherto kept by Mr. Falck, will be discontinued under the new system. A separate record has been maintained at Ogden showing the entire number of each article carried in the Service. This has been done to enable the Property Auditor to make prompt replies to requests for information from the Forester. It is believed that under the new plan this record can be dispensed with.

The plan which has been evolved has not received the formal approval of the Forester nor of the Department, but there is no reason to believe that it will meet with disapproval.

After the records are shipped to the Districts, Mr. Falck will devote his time to inspection and expert advice to the end that an efficient system of property accounting shall be maintained throughout the Service. As rapidly as practicable Mr. Falck will extend his inspection to other lines.

Alaskan Committee Makes Report

The report of the special committee appointed by Secretary Payne of the Department of the Interior to submit recommendations on the problem of the development of Alaska has been completed and sent to the different Departments and Bureaus concerned. The recommendations directly concerning the Forest Service were five in number:

(1) The committee recommended an intensive campaign for the development of the wood pulp and paper manufacturing in Alaska. This is already under way.

(2) The committee recommends that the surveys of pulpwood timber and water powers of the coast region be extended. This is already being done as rapidly as limited appropriations for this purpose are available. If the Poindexter bill for the survey of pulpwoods of the United States, including Alaska, should become a law, the recommendations of the committee would be fully met.

(3) The committee recommends a reconnaissance by the Forest Service of the timber resources of the interior of Alaska, with a view to determining whether they have value for future newsprint industry. It is believed that the information which the Forest Service already has upon this subject justifies a negative answer. The results of our previous investigations upon this point will be checked by the Forester during his present trip.

(4) The committee recommends that the export of birch and Sitka spruce be encouraged in every way. The Forest Service will advise Secretary Payne that this will be done, but that it is believed the development of the pulp and paper industry furnishes the best opportunity for the disposal of birch and spruce rather than exports in the form of lumber, since the manufacture of pulp and paper will furnish a more stable industry and contribute more largely to the development of regular transportation service.

(5) The committee recommends that the Forest Service investigate the possibilities of reforestation of the burned-over lands in the interior of Alaska. Upon this point it is believed by the Forest Service that it is of first importance to establish an adequate fire protection system for the forests of interior Alaska and prevent them from burning, instead of devoting our time and money to the study of how to replace them after destruction by fire.

Spruce Corporation Backs Down

About six months ago the Spruce Production Corporation offered to transfer a tract of about 12,700 acres near the Siuslaw Forest, together with the sawmill and railroad which it has acquired, to the Forest Service. This looked like "easy pickins" and the Service accepted the offer conditionally upon certain necessary legislation. Since then, however, the officers of the Spruce Production Corporation have been completely changed and new men are now in charge who believe that the corporation should completely liquidate its affairs during the year limit granted them by Congress. The Forest Service was consequently advised that the former offer must be withdrawn. Upon receipt of this news Secretary Meredith wrote to the Secretary of War and requested a modification of the decision whereby one or two alternatives might be adopted. One was that the Spruce Production Corporation sell the mill and railroad, but turn the land and timber over to the Forest Service, the Service agreeing to dispose of the timber to the purchasers under our regular timber sale procedure. The second was to sell the mill, railroad, and timber, but transfer the land to the Forest Service, the sale of timber being subject to reasonable regulations to prevent injury by fire and to secure satisfactory reproduction.

In a recent interview Mr. Sherman took up with the Secretary of War the desirability of having the Government retain title to the land in the project tract. It was pointedout that if the sale were made as an unrestricted sale of timber rights, the Government would receive as high a price without the land as it would with it, since in commercial sales of a similar nature purchasers are not required to give the land any valuation aside from the timber. This plan was approved by Secretary Baker, who wrote to General Menoher, who is the Director of the Air Service. The conference resulted in General Menoher wiring the Portland office of the Corporation of Secretary Baker's desire that the title to the land be retained by the Government. If this was not possible the Corporation was requested, if practicable, to include in the sale the condition reserving the right to the Government to repurchase the land within ten years at the price of not more than $1.25 per acre, payable in cash or timber. No news has been received as to the final outcome of the matter.

A Planting Plan for New Proving Ground

Wild stock will be used in planting the roadsides and parkways of the new navy proving ground at Dahlgren, Virginia, under a plan which was prepared by Mr. Sudworth after spending several days on the reservation. The proving ground consists of about 3600 acres along the lower Potomac River, which it is understood will supplant the present proving ground at Indianhead. Most of the land consists of open fields and the naval officers stationed there are anxious to make the area as attractive as possible.

Ample funds are available for the construction of buildings and dredging, but no money can be had for planting trees. Mr. Sudworth decided, therefore, that the native wild stock which occurs in abundance could be used instead of nursery stock and says in fact that plants of this sort can, if properly handled, be expected to fill the purpose as well as stock purchased from nurseries.

The principal planting is to be done along the parkways and roadsides. Native species, such as oaks, sweet gum, walnut, elm, and ash, will be used. The services of enlisted men will be utilized in doing the planting in order to save the expense of hiring labor. Mr. Sudworth drew up tentative plans for the establishment of a nursery in which wild stock would be transplanted and left for the necessary length of time to develop a good root system.

The Duty of Money

Allotments for travel from the G.A. fund in the Washington office have averaged $30,000 for several years past. The estimates submitted for 1921 totaled $31,000. The actual expenditures for travel from G.A. were $20,000 in 1919 and are expected to total about $21,000 in 1920. This difference of about $10,000 between allotments and actual expenditures has heretofore been available toward the close of the year, when, by means of a financial "round-up" and much overhauling of allotments, the available surplus was transferred from travel allotments to other uses.

For the year 1921 all surpluses are urgently needed on July 1, instead of in February or March or April of 1922. To enable these surpluses to be available on July 1 no individual travel allotments from G.A. are being made to members of the Washington office. A single G.A. travel fund of $18,000 is being set up and travel expenses of designated members will be charged to this common fund. It will be the duty of the Branch of Operation to watch the total of travel expenses and see to it that proper adjustments are made if needed.

It may be that the same methods can be adopted in some District offices, and perhaps also in some Supervisors' offices, with the effect of making surpluses available at the beginning of the fiscal year instead of at the end.

Roy Headley.

Those Reindeer Experts

It certainly does pay to advertise. The notice that an Expert in Reindeer grazing was wanted by the Biological Survey had scarcely been printed before the Chief of the Biological Survey advised the Forester that he had selected two men from our small list of Grazing experts for the proposed reindeer investigations in Alaska. That was going one better than we intended for the original idea was to take but one man. However, when Mr. Nelson of the Biological Survey went over the list furnished him by the Forester's office he decided he would like to have two instead of one, and, after carefully considering the claims of several would-be successors or rivals to Santa Claus, he asked the Forester to approve the transfer of Grazing Examiners Lawrence J. Palmer and H. W. Johnstone from the Forest Service to the Biological Survey.

This has been done and at Seattle the two men will join Mr. Nelson of the Biological Survey and the other members of the party detailed for this work, from which point they will sail for Alaska on July 1 with the understanding that they will be engaged on this investigation for the next eighteen months, after which they return to the States.

The Branch of Grazing hated mightily to give up two such good men as Palmer and Johnstone have proved themselves to be. The reindeer job however, offered a fine field for investigative work such as they are peculiarly fitted for and the salaries were so much above anything the Forest Service could hope to pay them for several years to come that the Forester felt it was no more than fair to give the boys an opportunity to accept the job.

Palmer is a graduate from the University of Nebraska, an institution which has turned out an unusually large number of excellent grazing men. He entered the Service in 1913, being stationed successively on the Arapaho, Manti, Caribou, Sevier, and Cache Forests until 1919 when he was attached to the Ogden office as Grazing Examiner in charge of the Grazing studies work in District 4. He has proved himself a first class man in his line and should make good in this new field.

Johnstone entered the Service in 1914, serving as Guard on the Caribou, Manti, and Sevier. He was Grazing Assistant in 1917 and Grazing Examiner in 1919, since which time he has also been attached to the Ogden office.

Both these men will bring to their new field of labor a ripe experience in their line which will enable them to grasp the details

Those Reindeer Experts (Cont'd)

of the rather difficult subject which they are to investigate for the Biological Survey. There is today a tremendous amount of enthusiasm among certain individuals regarding the future of the reindeer industry as a purely meat-producing proposition. Most of their figures and predictions read awfully like unto those which were made during the early days of the open range live stock business in the western States of this country, say along about 1879 to 1886. "Unlimited ranges, room for countless millions of animals, heavy increases and no losses." Sounds like those early boomers.

Stephenssen, the explorer, it is said, has already formed a London company, capitalized into the millions of pounds, which expects to get into the reindeer game in the Canadian region and flood the world with reindeer meat produced for the greater part on a feed that requires about nine years' growing season to reproduce itself. Its mighty fortunate indeed that before this country goes into the thing it has been deemed wise to get some reliable information on the whole subject and thus plan the breeding of these animals on a safe and sane foundation.

Palmer's new official title will be "Assistant in Reindeer Grazing Investigations" while Johnstone will sign his name on the pay roll as "field Assistant and Deputy Fur Warden." Don't read that "Fire"; it's "Fur" Warden. Bring us a Polar Bear hide, boys.

Will C. Barnes.

(Notice: Send the hide to the Editor of the Bulletin to pay for the advertising:- Hereafter no advertisements accepted unless accompanied by payment in cash or equivalent.)

New Inspections Proposed

That there is need for inspection of Supervisors' offices in the western Districts along broader lines than is now being done by the administrative audits by District officers has been felt for some time. To accomplish this broader inspection the Branch of Operation has planned an administrative inspection which will be supplemental to the District audit.

To carry out this plan A. H. Cousins has been designated to make such inspections in so far as his other duties will permit. In taking up these new duties Mr. Cousins will make inspections on the Forests and in the District Offices. His time for the most part will be spent on records, methods, etc. This inspection will be done from the standpoint of the Forest Service as a whole and not be merely a checking of records for the benefit of the individual District. The purpose is to gather information on methods, procedure, special local conditions, new ideas, policies and management efficiency. Mr. Cousins will give his first attention to conditions in Supervisors' offices and District offices of Operation, but his instructions will provide for widening the scope of his inspections so as to include ranger offices if conditions make this necessary to get full understanding of needs or to report facts.

Among the major subjects on which Mr. Cousins will be required to report are:

Administrative and business methods
Equipment and supplies
Care of property
Expenditures
Records
Office methods
Correspondence
Quarters
Use of time.

New Inspections Proposed (Cont'd)

Before working in any District Mr. Cousins will get in touch with the District Forester to ascertain whether he can be of use to the District Forester by cooperation in inspection which is primarily of District interest. - Roy Headley.

Acquisition Transferred to District 7

Effective July 1, field work in Acquisition will be transferred to District 7. The entire field force now engaged in acquisition surveys and appraisal will be taken over by the District organization. Forest Examiner Dieffenbach and the Washington office acquisition clerical force will be included in the transfer. Mr. Ashe, however, will continue in charge of the Acquisition work for the Forester's office and will pass upon all proposed purchases and deal directly with the National Forest Reservation Commission. Under the new arrangement he will be relieved of much of the office detail and will have an opportunity to examine more of the areas before purchase than has been possible in the past.

District 2 - Rocky Mt. District.

Is the public interested in the construction of good roads and the recreational development of the National Forests ? Read the following resolution passed by the Colorado Good Roads Association at their annual meeting in Colorado Springs on May 29:

"RESOLVED: That the Colorado Good Roads Association desires to express its appreciation of the policy of the Federal Forest Service in the construction of systems of good roads within the National Forests both for commercial purposes connecting with our State highways, and to the end that the Forests may become increasingly recreation grounds not only for our own citizens but those of the Nation.

"In this matter of road construction in the National Forests in Colorado we especially commend the interest and activity of the National Forest officers in this District and the spirit of cooperation with local officials which they have evinced.

"We recognize the inadequacy of the funds at their command and respectfully urge our representatives in Congress to advocate and support more liberal appropriations for this purpose."

An interesting article on municipal camps in National Forests by Recreation Engineer Arthur H. Carhart appeared in the May edition of "The American City" under the title "Where City and Nation Unite to Act as Summer Hosts." The cover page of the magazine also shows a National Forest scene and mentions this lead story. (Read also what District 7 says regarding this item. Ed.)

The first motion picture trip of the season was completed on June 10 in the San Isabel National Forest by a movie operator from the Universal Company, New York, in company with Supervisor A. G. Hamel and W. I. Hutchinson of the District office. Over 1400 feet of film of the scenic wonders of the Sangre de Cristo Range and the Spanish Peaks country were "shot" for the Universal Screen Magazine.

District Engineer Bright of the Bureau of Public Roads and District Engineer F. D. Mendenhall have just finished inspecting the Buffalo-Tensleep Road on the Bighorn Forest in Wyoming. It was decided to relocate a section of this road to go over Muddy Pass inst of by Hazelton and thereby save approximately $21,000. Work is pro gressing in excellent shape. Two steam shovels are on the east side and one on the west side are being used.

On June 15, the work of the preliminary committee of the proposed Colorado Fish & Game Protective Association bore fruit by putting over the organization in fine shape. While the attendance from other places than Denver was not large, there were plenty of delegates to give good outside representation and a permanent organization was effected by the election of officers and the drawin up of a constitution and by-laws, and by having the organization incorporated. A highly satisfactory platform, containing a number of clauses suggested by the Forest Service, was adopted and an excelle corps of officers was elected. The officers consist of a President from outside of Denver, a Vice-President from Denver, and the Secretary-Treasurer is also a Denver man since the principal office of the organization will be in Denver. A Vice-President was also elected from each county of the State. There are 63 counties in the State of Colorado and one of the main purposes of the organization is to work up an interest in the wild life which will be State-wid The organization gives promise of becoming one of the biggest thin yet put over in the interest of game in Colorado.

Wm. L. Barker, Jr., of the District Office installed a forestr exhibit, occupying a space of 7 x 42 feet, showing roads, recreatio and fire protection features, at the Denver Industrial Show in the Denver Auditorium. This show ran from June 21 to June 26, and was one of the biggest of its kind ever attempted in Denver. Although the Forest Service was rather a side line - the other exhibits bei made up entirely of goods manufactured in Denver - the Offic of Information felt that it was a very desirable way in which to give the Forest Service some publicity with the local people.

District 3 - Southwestern District

In a recent sale of private stumpage on holdings within the Eldorado Forest, California, the owner applied to the Forest Supervisor for help in drawing a sale contract as if National Forest stumpage were involved. The sale was finally consummated on the basis of a contract which contained every clause usually appearing in a Service sale. Both the buyer and seller apparently were satisfied.

Forage. At Hackberry, where forage crops were never known or heard of before, we have just put up about eight tons of barley hay from last fall's planting ! At Sunflower we are putting up about five tons of good oat hay! At Reynold's Creek we will be able to harvest several tons of good hay if the rains help a little! At Payson we have excellent prospects for a good crop of hay! And at Pleasant Valley!! Oh Boy! *We are going to have our forage money and buy travel. -Tonto-

District 3 is enjoying a two weeks visit by Assistant District Forester Granger in charge of Forest Management in District 2. That district is getting a sale of 300,000,000 feet b.m. on the Montezum Forest lined up, and in doing this Mr. Granger is particularly interested in the standards and methods of practice worked out by District 3 on its yellow pine sales. Mr. Granger has just been over some typical sale areas on the Coconino with Mr. Marsh, and went with Mr. Lang to the Santa Barbara and Hallack & Howard operations. An opportunity of this sort for an exchange of ideas is welcomed by us.

Deputy Supervisor Girdner reports that a cowpuncher on the Mud Tanks round-up was chased 75 yards by a mountain lion a few days a M. E. Musgrave has detailed Ramsey Paterson, the famous lion man, t make a clean-up in the Mud Tanks country. Four lions were seen in that locality at one time.- Coconino.

*the corn, hay, potatoes, and fruit we are going to harvest there! SOME FARM, this Tonto!

The beam in our own eye: Is there salt in your station corral?

The Pecos reconnaissance party, consisting of Mr. Doherty and three assistants, is making a map and estimate of the Colonias Addition to the Santa Fe. The purpose of this work is (1) to furnish a map for general administrative purposes, (2) to furnish an estimate of the supply of cordwood, mine prop and post material available on this part of the Forest, and (3) with the above data and additional data on growth and yield, coupled with a market study, a working plan will be drawn up including therein a timber sale policy for the area.

You say the Tonto as a forest is a mighty poor excuse,
That our hills are grown to cactus 'stead of yellow pine
and spruce,
That our recreation featureswere drowned in the lake;
And our game supply's restricted to a stunted rattle snake!

Say, Pardner, where'd you get it? Who's the guy that put
you wise?
If seeing is believing then come down and try your eyes;
We can show you heavy timber that will make your old pulse throb
We can show you summer camp sites that will make you quit
your job;
We can show you shady trout streams; we can show you game galore
From Mountain sheep to turkey or a Javelina Boar!

We can show you if you'll let us where heaven sprung a leak,
And the nectar still is dripping from the Falls of Workman
Creek;
Or if you are a sinner and prefer a bit of hell,
You can satisfy your longing in the rocky Mazatzal!
Or the Superstitious Mountains whence victorious warriors fled;
And the legends of the ages are buried with the dead.

We admit that we are "Tontos" but you can tell the world,
They'll find our flag still flapping when the other flags
are furled;
For we can show resources upon which we base our claim,
That the Tonto is a Forest and deserving of the name!
-J.H.S. - Tonto.Fores

The unmarried ranger can contemplate his entrance to the so-called state of wedded bliss without some of the doubts that assail his brother in the cities and towns. In the last two years there have been 2,080,000 marriages in the United States but a total of only 90,000 houses built in the same period. Even our $1000-limit ranger stations are palaces compared to the homes of those who may soon be forced to sing, "Tenting tonight, tenting tonight, tenting in the old city park."

A proposed sale in the oak type is now pending on the Chiricahua Division of the Coronado, an application having been received for a sale of 6,000 cords per year. Forest Examiner Wilson has been making a study of sales policy on this Division. An interesting feature of this proposed sale is that sprouting will be relied on for reproduction.

According to figures recently compiled in this office, the net area within the National Forests of Arizona is stocked at the rate of one cow to every 29 acres, and the net area within the National Forests of New Mexico is stocked at the rate of one cow to every 3 acres, reduced to cow units, yearlong basis. The above figures are based on the authorizations for the two States.

District 3 - Southwestern District (Cont'd)

Scaler Merkle and Examiner Backus staged a little old Spanish stuff while returning recently from a timber sale job. The aforesaid were driving the Ford through a park in the woodland type and encountered two youthful cow persons wondering which one was going to be elected to untie a long horn steer they had thrown. The steer had lost one horn in the engagement besides sustaining minor lacerations and did not have the appearance of being amenable to reason. A small juniper tree stood about thirty yards from where he lay. Merkle, who used to "Chowse" 'em 'round quite a bit in his youthful days in Oklahoma, being invited to participate, descended from the Henry to oblige and did so. Upon completing the job, he made the distance to the juniper tree in two seconds less than nothing. The steer got up, oriented himself and shaded Merkle's record to the tree by one-half second, then, although they had been strangers up to that time, seemed very anxious to get just as close to Merkle as possible. During the 13th lap around the tree, the driver of the Henry woke up and discovered that Merkle was beginning to skid on the turns so he went into low, hooked the throttle down in the corner and took a hand. The impact shook the steer from the T bone steak to the brisket and right then he got discouraged and went out of action. Merkle climed in, took a few long breaths and everybody went on their way happily. Flattering offers have since been received to put on this act at the Las Vegas Cowboy's Reunion. All cinema rights reserved.- Santa Fe.

Recently a trapper on the Crook took up the trail of a lion. He followed his track three days on horseback until too rough, whereupon he tied his horse to a tree and followed his dogs on foot. When night overtook him he was too far from his horse, so he built a fire and camped for the night. The next morning he, with his dogs, took up the trail again and finally wound up at his horse. To his surprise, he found the lion had killed his saddle horse.

Beware, visiting Forest officers, for the lions on the Crook do not hesitate at meal time as on the Santa Fe. - Supervisor Swift.

District 4 - Intermountain District

At a meeting of the State Road Commission of Utah June 16 the Commission stated that it would not have additional funds available to complete the Fruitland Section of the Heber Fruitland Project this year. It will be necessary, therefore, to reduce the miles to be constructed at this time. The bidder whose bid is being recommended for acceptance is willing to enter into a contract to construct about one-half of the Fruitland Section at the prices of the bid with the funds available.

District 5 - California District

Last fall Mr. William H. Kent took up with the Service the question of the development as a public camp ground of a tract of land owned by him at Lake Tahoe. The upshot of the matter was that Mr. Kent donated to the Forest Service 22½ acres of land on the condition that it be made into a camp ground which could be used by people who visited Lake Tahoe and who did not wish to stay at a hotel. Final plans for the development of the area have been completed and a considerable amount of work done. It is hoped to have the camp ground open for use by July 1, and it is certain that the area will be extensively used by visitors.

About 15 acres of the tract are well suited for camping purposes. The plan for the development of the area calls for the construction of a pipe line to bring water to all parts of the tract, the erection of comfort stations, incinerators, a road through the center of the tract, and parking spaces. It is also proposed to erect a ranger station near the entrance.

It is confidently expected that this camp ground will prove as popular as any of those now in existence on the National Forests. Tahoe Lake is visited each summer by thousands of people and since practically all of the lake shore is in private ownership, there is little opportunity for visitors to enjoy the beauty of the lake or to go in swimming without paying for the privilege. The camp ground provided through Mr. Kent's generosity will give these people the same privileges enjoyed by those who are fortunate enough to own lots along the shore.

"On page 10 of the Weekly Bulletin (Washington Office) for May 31, we 'note with surprise" (to use a hackneyed phase) that the results of District Five's 'Fire Prevention Week' campaign are credited to District Four. Also that the Brandenburg case was reported as from the same District.

'S all right! We acknowledge our indebtedness to District Four for most of the material in the special edition of the 'News Letter', but we really thought the balance of the campaign was ours.

How about it, Mr. Editor? Was it because you were off on vacation (with the Printer's Devil in charge), was it a typographical error, or what? Do let us know."

Note: No alibi possible this time. The trouble of course was caused by the omission of the heading "District 5 - California District" at the proper place. It is just one of those accidents that will happen in the best regulated families and on the best edited papers. There have been lots of times in the past few weeks when the editor figured himself lucky to get the Bulletin out at all.

"Dear Scott (D-4): Will you send me another copy of your Forest Protection Week Bulletin? I've cribbed about all of it for a special edition of our News Letter and need a fresh copy. My apologies for the cribbing, but why be "persnickety" when you find a good thing?---
-Hammatt."

"Dear Hammatt (D-5): Here's the Bulletin. Talk about cribbing, I cribbed this whole thing, almost! Help yourself, and glad to think it may be of some value to you. An EC man ought to be a good "Pirate" first of all.- Scott."

During Fire Prevention Week the Forest Service cooperated with citizens of Sisson in burning the brush that had been cleared up on the public camp grounds at Sisson. This is as fine a public camp ground as can be found anywhere. Sisson has a man camped there all the time to take care of the people. He is a frequent visitor at the Forest Service office, asking for literature to hand out to camping parties. He gives every party a card, warning them to be careful with fires.

"Warning to Campers--Tallac Hotel is in the Eldorado Forest. This wonderful Forest belongs to the nation. Protect it. Watch your fires and be sure they are extinguished before leaving",--is the wording which appears on the new and attractive folder which Mr. Warfield, Tallac's new manager, has just gotten out.

District 5 - California District (Cont'd)

On May 31, Logging Engineer Perry Emigh fell over a cliff some miles back of Northfork, on the Sierra Forest, receiving serious contusions of the left thigh, fracturing the head of the left fibula and the seventh and eighth ribs on the left side, as well as other injuries. Mr. Emigh, who was alone at the time, was rendered unconscious for more than two hours. Upon coming to, he managed to crawl to the road, where he built a fire. The fire was noticed from Northfork and a rescue was effected. From Northfork Mr. Emigh was removed to the Burnett Sanatorium at Fresno, from which place it is hoped he may later be taken home. Last reports are to the effect that he is recovering slowly.

District 6 - North Pacific District

Supervisor Billings has sent out recently effective fire cooperation letters to the cattle and sheep permittees on the Wallowa. These letters impress upon the permittees very strongly that it is to their interest to protect the range and the forest from fire, are clear, to the point, and tell the permittees what is expected of them in a courteous and businesslike way. Fire cooperation with the cattlemen is handled through associations; the sheep men are asked individually to send to him the following information:

1. Where can you or some person authorized to act for you be called in the case of fire, and can you be reached by telephone?

2. How many men can you furnish for fighting fire?

3. How many pack horses and outfits can you furnish?

4. What is the location of your provisions, and how many men can be supplied for 5 days?

With the letters are sent extracts of the Oregon State Fire Laws, and the Federal Fire Laws.

The Portland Post Office is using the cancellation stamp, "COLUMBIA RIVER HIGHWAY. OREGON NATIONAL FOREST."

This is an age of marvels. A resident of Portland, president of the Mount Hood Airship Company, capitalized for $100,000, called on Supervisor Sherrard, of the Oregon Forest, in the early part of June for a dozen or so special use permits. These permits had for their object what Wallace Irwin calls "the improvement of America." Here is a list of what this applicant wanted and wanted at once, since he had already had a number of tickets printed for round-trip fares from Portland to the top of Mount Hood, which he was apparently expecting to dispose of during the Shriners' convention, June 23 to 24:-

1. Cable line from timberline to top of Mount Hood. This cable would draw two passenger cars or sleds over the snow. Each car would have a capacity of 25 passengers. To each car or sled would be attached a captive balloon carrying ten additional passengers - a very simple arrangement, since as one car and balloon would go up the other car and balloon would naturally come down. The power to run this arrangement would be developed from a hydro-electric plant on Zigzag Creek - yet unbuilt.

District 6 - North Pacific District (Cont'd)

2. A permit for a $75,000 hotel at Twin Bridges, in the vicinity of Mount Hood, capacity 150 rooms.

3. A permit for an amusement park at Twin Bridges,- 50 acres, to include swings, merry-go-rounds, peanuts and pop-corn, etc.

4. A permit for three or four miles of wagon road ~~for~~ from the present Mount Hood loop road to timberline.

5. A landing platform for airships on the top of Mount Hood.

6. Fish ponds near the top of Mount Hood,- where probably not only a supply of fresh fish could be propagated for his hotel and other resorts, but where the tourists could possibly catch their own fish for breakfast!

7. Some arrangement,- not made entirely clear,- whereby autos will be taken to the top of Mount Hood and then down the north side.

All these various and sundry devices to "improve" Mount Hood were desired by the applicant, and presumably it was his intention to have them all completed within less than a month, since he had already a supply of Mount Hood tickets printed.

Forest Examiner N. L. Cary resigned on June 9 to accept a position with the Firestone Tire and Rubber Company, of Akron, Ohio, as forester for one of their rubber plantations in Sumatra. He expects to sail shortly from San Francisco to take up his work. Upon his arrival in Sumatra he will join several other foresters, graduates of the Forest School of the University of Michigan who have accepted positions with American rubber companies having plantations in the Far East.

In preparation of the airplane patrol to begin about June 25, 90 lookout stations in Oregon have had identifying numbers painted on them in black on a white 15-foot triangle. Quadrangle maps have been prepared, giving the key numbers of these lookouts. Liaison officers have been appointed and stationed as follows: Forest Ranger Fred M. Gruver, Medford; Forest Examiner Charles W. Boyce, Eugene; Forest Clerk William L. Naylor, Portland;- all of whom received training at March Field, while Messrs. Gruver and Boyce had been in the Air Service previously. Captain L. H. Smith will be in charge at Eugene, the main base, where four machines will be stationed, with two at Medford.

Nineteen million feet of Sitka spruce from the Tongass Forest has been sold to the O. W. Brown Lumber and Box Company, of Craig, Alaska, at $2.60 for spruce and $1 for other species. The timber was sold during the war for airplane purposes, and the sale canceled after the armistice.

A recent compilation shows that since law enforcement work started in earnest in this District, about 18 months ago, $18,772.39 has been collected for damages. There still remains to be collected $22,355.66 from pending cases, with good prospects of success. The experience of this District in prosecuting fire trespass has been encouraging from the standpoints of fire prevention and of revenue. The cost of fighting the fire is returned to the fire-fighting fund from the damages received. The logging companies in the District are showing a desire to lessen fire hazards, and in some cases have asked the ranger to inspect their operations and advise where this may be accomplished.

District 6 - North Pacific District (Cont'd)

Ranger Albert Weisendanger of the Eagle Creek Camp Grounds believes in "doing it now." On June 1, two Fords from Washington camped at Eagle Creek. The party left for Portland - and also left a camp fire. Albert got the sheriff's office on the 'phone, described the party, the sheriff's men got the careless campers before they got to Portland. Supervisor Sherrard swore out a warrant the careless campers plead guilty, paid their fine - and its a cinch that next time they will put OUT their fire before leaving it.

Episode No. 2: On June 2 another careless camper left an unextinguished camp fire at Eagle Creek. Albert, having got the habit of doing things today, got the sheriff - and Judge Hawkins decided that a ten-dollar fine would be about right for that!

District 7 - Eastern District

Another summer home article, this time in "Good Housekeeping" by Arthur M. Carhart, Recreation Engineer in District 2, has started a second influx of letters regarding the possibility of securing summer home sites in the eastern Forests. It is very embarrassing to District 7 to have to disappoint these trusting applicants, but there is nothing else that we can do.

Jhon W. Fox has returned from an extended trip to the Arkansas, Ozark, and Wichita Forests, where he went on road inspection work. Mr. Fox reports that during the past spring parts of the Arkansas Forest were subjected to conditions very similar to those prevailing in the southern Appalachians in 1916. Continued rains resulted in the soil becoming thoroughly soaked. On top of this there were several days of a heavy downpour which could not be absorbed by the soil. As a result there were several floods, and in many places the creeks and streams were higher than they have ever been known to be. The Caddo Valley road, about seven miles in length, which has been constructed by the Forest Service during the past two or three years, was almost completely wiped out. The high water took out all of the bridges except one, and by cutting a new channel left this bridge high and dry some distance from the present stream. It is probable that an entirely new construction will be necessary.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

July 5, 1920.

Lightening the Load

(Foreword.-While in Washington, Mr. Morrell advanced the idea at a Service Meeting that Supervisors should not be expected to handle as much or more work than usual with the reduced allotments being given them unless instructions or suggestions are issued by Washington as to how standards of work may be modified to meet the reduction in funds.

Mr. Morrell's idea started what the newspapers would call a spirited debate. Mr. Barnes ventured the opinion that there is a certain percentage of camouflage in the Supervisor's conventional objection to reports on grazing. Mr. Headley was seriously disturbed for fear that in the end Mr. Morrell's casual way of advancing uncomfortable subjects would cause more work for Operation. Mr. Sherman winked both eyes rapidly several times and looked as though he were about to say something conclusive, but refrained.

The upshot of the matter was that the Forester asked Mr. Morrell and Mr. Reed to make an investigation and submit a report. This was done, and among other things it was recommended that routine be decreased by eliminating grazing reports, discontinuing ordinary stock counting, slackening up in plans for salting stock, and by holding down attendance at meetings of stock associations and advisory boards.

Mr. Barnes' views on the matter are given below. Readers of the Bulletin are warned to be on the lookout for the next issue. An interview with another Branch chief is promised. It's too hot to print now and must be given time to cool.- Editor.)

The question of eliminating all unnecessary activities during the coming fiscal year due to shortage of funds and men is, in my judgment, a matter that each administrative officer can and must work out for himself, the District Ranger for his particular area, the Supervisor for his Forest, the District Forester for his District, and the Forester for the Service generally. I doubt if any definite instructions can be laid down which will apply to every unit of the Service. Each man must work the problem out to meet his immediate needs and the actual working conditions he faces daily.

Many of our activities in the Branch of Grazing are optional in a way, and it is up to each man in an administrative position to exercise good judgment as to how far he should go in cutting out certain routine grazing work.

The counting of stock, for instance, is not an absolute requirement but is left to the discretion of the Supervisor or Ranger.

There was a time in the early days when many permittees felt that it was a perfectly legitimate occupation to undertake to graze more stock than their permits called for. Today, due to feedlot counts in winter, when there is plenty of time to do it, coupled with the thorough information we now have as to the number of stock owned by each permittee, there is no real danger in cutting out this work temporarily with cattle permittees, especially as it comes at a time when Rangers are mighty busy and every hour is valuable.

The sheepmen count their herds at frequent intervals during the summer to check up losses, etc. By dropping in occasionally at such affairs the Ranger can get a line on the number of animals and keep very satisfactory track of things along that line.

Our field men all do a tremendous amount of gratuitous fish and game work that is interesting to them and profitable to the public, but which, in a way, is not primarily our job. Here again, this can be handled in the discretion of the men involved, for the regulations are not mandatory. "As far as they can without undue interference with their regular forest work," the regulation states, and, therefore, under present conditions much of this work could be cut out if more important matters demand attention.

On many Forests we have been so active in watching for violations of game laws, stocking up streams with fry, meeting fish cars with autos and pack horses to carry fry back into the distant mountains that the State authorities are simply sitting back and letting us do the work while they get all the glory. I fancy the amount of actual cash we spend every year in stocking streams with fish fry runs up into the thousands of dollars; all very well when times are good and money plenty, but not necessarily a duty under present straits.

Several of the districts keep up a "Fishing Conditions" service through the summer months, which requires the Supervisors to wire in at the end of each week and report on the condition of roads, fishing streams, etc. This is a very public-spirited piece of work but it must cost us a lot of money for telegrams to say nothing of time. Is this a necessary part of our official duties under present conditions?

I do not understand the real accomplishment to be gained through any "slacking up in plans for salting stock." That's the stockmen's job, not ours particularly. True, we have put in a lot of time getting these plans into shape and teaching the permittees their value. Speaking broadly, our part of the work is done. We have pushed and boosted the "salt wagon" until it is out of the old rut and moving fairly well under its own power. All it needs now is a little watchfulness on our part to see that it is kept moving, and this should take comparatively little time.

There is, however, an opportunity for saving money by cutting down attendance at stock and advisory board meetings, of which we should take advantage. The Washington office has tried to keep the brakes reasonably tight on this matter, but under present conditions much can be accomplished through a closer scritiny by District Foresters of the lists of men who attend these meetings. If possible, one man at least should be present at such meetings to represent the Service. Seldom is there need for more. Seven attended one meeting in the West last winter and while the contact with the stockmen was helpful and "a good time was had by all," still I doubt if it paid back its cost. In the interests of economy of G. A. funds, attendance at such meetings could well be restricted for a year or two, and the time and money used could be applied to more pressing needs.

I am unalterably opposed to the suggestion for eliminating annual grazing reports and cost keeping. The annual grazing reports are the one single point where the Washington office gets into touch with grazing conditions. If cutting out the reports meant a saving in time for the Supervisor in his field work or anything of that sort it might be tried. But do the proponents of this scheme intend that the Supervisor should stop all field inspection work along grazing lines? If not, what real saving in time will result from cutting out the report? Not a thing. The annual reports are the substance of the Supervisor's study of his grazing ranges during the summer field work. It is the only record of this part of his activities. Take it away and his successor, and goodness knows we have plenty of "successors" in these changing times, will not know a thing as to what has happened or what his predecessors thought of the grazing during a certain season.

Lightening the Load (Cont'd)

If a Supervisor has done his plain duty to himself and his permittees during the summer and has kept notes of his impressions, he should be able to sit down and dictate his grazing report at the end of the season in a comparatively short time, and do it well at that. If he can not, then his investigations into grazing on his Forest have not been well attended to.

According to the data furnished, clerical help has increased some 20 per cent in the last five years. I have personally visited over a hundred Supervisors' offices in the last fourteen years, and while in most of them there are times when every one is busy and the work seems endless, still I have never seen a Supervisor's office where I felt that the clerical force was working as hard, taking the year round, as ours do here in Washington. My experience with most of our offices is that if it is called upon for a report due July 1, mighty few take any decided steps toward getting it into shape until about June 28. Then there is a huge rush to get the thing out and apparently every one is being overworked. This is so universal all through the Service that I refuse to become unduly excited over the plea of "volume of office work" of which we hear so much as an excuse for elimination of reports or delays in sending them. From my observations it is a lack of systematic planning rather than too much actual work.

Here is another thing, I would like to know: How much actual time is spent by Rangers in "going for official mail?" I have in mind several Ranger stations where this item cuts a terrific hole in the time. One is, as I recall it, 44 miles from the local town over a wretched road, and when you get to the town it is only a whistling post on a jerkwater branch with not even a movie place in its purlieus. What would be the eventual saving if that station and others like it were abandoned and the Forest officer located on the line of a regular rural route where his mail and supplies would be landed at his door every day by regular Postal Service. I fancy a study of this one item of what seems to be "lost time" would develop a huge leak.

Moreover, there is still another angle to this cry of shortage of man-power. The records show that so far as actual shortage is concerned, we have about 9 per cent less Ranger force than we had five years ago. But has any one ever stopped to inquire into the subject of greater efficiency on the range, due to better roads, autos, better located and more accessible stations? Miles upon miles of 'phone lines now exist where we formerly had none. There are many Forests where every Ranger station has a 'phone line leading right to headquarters, and the Supervisor can also get into his Ford-Arrow at his office door and motor to every station in his Forest over excellent roads.

Did any one ever figure out the increased efficiency due to these two items? My own impression is that in these two matters alone the efficiency of the average Ranger has been increased fully 30 per cent, if not more, in the last eight years. Hence, though we are short in numbers we really have more man-power available than we have had since the good old days when the Tonto had sixteen Rangers against five today, the Sierra twenty-seven against six today, with many others as heavily "stocked up" as these two.

Compare present conditions of travel with those of a few years ago. Take the Sierra. You hired a "pole team and buggy" at Madero, and toiled for ten long dusty hours up the grade to reach Northfork. There you outfitted with packs and then averaged about fifteen or twenty miles a day looking the Forest over. Today you hustle up to Northfork in a big Packard over a fine road and can reach a goodly part of the Forest via the same sort of travel. I'm not saying it's the better way. Quite on the contrary, I feel that you get more real first-hand knowledge of things on the back of a saddle horse than you do today via the Ford route. But "everybody's doing it" and we can't go back to old systems.

Lightening the Load (Cont'd)

Another thing which must be taken into consideration is that while ten years ago our field men were buried under a mass of work caused by claims of every kind, there are today practically none of the old homesteader's claims left, and mighty few new June 11 claims to bother with. Of course, other lines of activity have been developed, such as summer homes, camping and recreation features, etc., but looking back over the whole field, if our men are being overworked, I feel there is a remedy for it. What the Service needs, and that badly, is some proper coordination of our activities in the field, a more systematic method of planning the summer work for every man in authority, and better supervision of the carrying out of plans for this work by some one who can prune and check, modify and arrange such things so as to get the most out of every man's time. Mostly, we are milling around like a lot of cattle in a round-up, everybody lost and each one bawling loudly for help, when, if they would only stand still and do a little thinking, things would not seem half so bad.

Who is to blame primarily? The men in this very Washington office. It is up to them to so analyze this situation and then get busy with the fundamental requirements for remodeling our present methods of handling field work.

One thing more. Once there was a man who lived near a big swamp where nightly the bullfrogs sang him to sleep with a mighty volume of sound. He wrote to a big hotel in a nearby city to the effect that he had a million frogs on his farm and was prepared to ship frogs' legs in any quantity and on short notice. The hotel manager promptly wired him "Ship daily ten thousand frogs' legs until further orders." So the man fared forth in quest of frogs' legs. After several hard non-productive days he wired the hotel people -"Shipping you one hundred frogs' legs. Can't get no more. They fooled me with their darned hollerin!"

One wonders just how much "darned hollerin'" there really is behind this "lack-of-man-power stuff."

Will C. Barnes.

Administrative Studies

Investigations of forest problems of a biological or mechanical nature are recognized as a necessary part of our work and are regularly provided for, but little or no provision has been made for attacking in a systematic way the exceedingly important group of problems which fall loosely under the head of "administrative studies." Is this because there is nothing in the administrative problems worthy of systematic study by our best minds? Indeed, No! No branch of our work needs such attention more than the science and art of administration. Countless individual administrators are still rediscovering, each for himself, the elementary principles of administration. This is because so little has been done to record the discoveries and experiences of successful administrators for the benefit of others who are beginning their careers. Ideas of good administrative methods have not crystalized. The usual practice is a patch-work of good, bad and indifferent - with no recognition of the distinction between the good and the bad.

Here is a field which, while not wholly uncultivated, is full of jungles of ignorance and well-meant blunders. It is a field belonging preeminently to the busy administrators who are interested in the development of an advanced theory and practice of the art of administration. It is an inviting field for those of us who would have liked to do investigative work along the usual lines but who, under the influence of administrative work, have lost much of the habit of mind necessary for productive work in ordinary investigative channels.

Let us see if we bearers of administrative burdens cannot make a place for ourselves among the builders of professional knowledge and technique. Let us see if we cannot enrich our common life in the Forest Service by the study, experiment, and discussion of the fundamentals underlying our administrative problems.

How shall we begin? In the first place, what we do must be purely voluntary; done because the individual is interested and enjoys the intellectual effort and associations involved. To avoid the sin of duplicated effort there must be cooperation and coordination, but that can be attended to later.

Suppose I make a start by listing a few of the interesting problems which might be attacked. Then suppose that any readers of the Bulletin who would like to participate write me direct, stating what subjects they would like to pursue and what capacity and opportunities they can bring to their study. I shall be glad to correspond with such volunteers, see that help in the way of references, etc. is given them and offer criticism and suggestions when that would be helpful.

The Bulletin is the natural vehicle through which ideas could be put before other investigators and our Service public. As the material is accumulated, the more valuable work should of course, be published in more ambitious journals, but for the purpose of interest and stimulus to ourselves, the Bulletin, with its informality and its invitation to frank discussion, is a necessary part of our cooperative enterprise.

While I do not think we want to undertake administrative studies in the same way that we would tackle reports requested and made through regular organization channels, our work will nevertheless be official and should lead to meetings of groups working on the same subject and should mean study details where a man gets far enough along to be able to make his work profit by such contact. These aids to our administrative studies may have to await more prosperous times but they should be looked forward to as one of the elements which will add to the satisfaction to be derived by the officers who care to make an effort along the line of administrative studies.

The list of subjects given below is intended to be merely suggestive. Whenever a man who wishes to participate in this cooperative enterprise, has done some work on a subject not mentioned here, I shall be glad to have him designate that as the topic to which his efforts will be directed. To begin with, it would perhaps be well to confine ourselves to subjects which can be classified as administrative, but if anyone has a strong interest in some related subject such as game or engineering, for example, he should not feel forced to transfer his interest to some administrative problem to participate in a program of recognized studies.

The following list is intended to indicate the lines in which busy administrators are most likely to be interested:

Personnel:

Training.
Recruiting.
The Round Peg in the Square Hole.
How to deal with the man who would be fired if it were your own business.
The Problem of the Lazy Man.
The Problem of the Man Who is Leaving Some of his Powers Unused.
Methods of Rating Efficiency.

Administrative Studies (Cont'd)

Personnel:(Cont'd)

The problem of assigning to each officer, as Supervisor and Ranger, those functions and only those which he can discharge to better advantage than any other member of the organization.

Ways of giving entire membership of the organizationa share in the molding of policy and practice, extent to which participation by entire membership of organization in molding of policy and practice, can be made to add to interest and enjoyment in our work.

Beautification of Ranger Stations.

Opportunities for adopting a form of National Forest architecture that will be distinctive.

Roy Headley.

Quick Work

When the Capper Report was completed everybody concerned heaved a breath of relief and said, "Thank the Lord, that's finished." As a matter of fact the printing and distribution still had to be arranged, and that of itself was some job. For a time there was doubt, in the absence of Congress, as to how this would be done. The necessary authority was finally secured, however, and on June 30 the work was completed and the first copies delivered.

Here's the way the record reads:

June 18 --Authority to publish secured.
Manuscript read and prepared for printer, and delivered to the Printing Office.

June 22 --First galley proof received.

June 25 --Galley proof returned to printer.

June 28 --Page proof received, corrected at Printing Office and returned for final printing.

June 30 --Publication completed.

Some record! And the credit goes to Claude M. Ballard and Ed Burkholder. No official instructions could have gotten the report printed in such short order. As soon as it was known the report would be published Ballard and Burkholder got busy. Everybody who had anything to do with printing the report, down to the last messenger, was impressed with the importance of giving the report right of way over everything else. From the time the manuscript was received until the completed publication was delivered, Ballard camped on the trail of the report and helped it over the rough places, clipping red tape regardlessly and upsetting long-established routine.

It all goes to show what knowledge of the ropes, thorough familiarity with every detail of their business, close friendship with their associates, and the judicial application of liberal amounts of blarney, can accomplish. Ballard and Burkholder had what all of these tools to work with and are adepts in their use. But counted even more was the fact that they rolled up their sleeves and put in long hours of hard work.

Quick Work (Cont'd)

The Capper Report established a new record for speed. Other Forest Service publications, thanks to careful and painstaking work by Everard, Ballard, and Burkholder, have already established new records for excellence. All of which goes to show that the old "spirit" of the Service is still alive.

Rangers' Per Diem

The numerous difficulties that have been experienced in the past in connection with reimbursement of ranger expenses when traveling with pack horse and subsisting from their own supplies have at last been fully met by a paragraph in the letter of authorization from the Secretary to the Forester which reads as follows:

> "Pack trip per diem for Forest officers at the rate of $1.20 per day is authorized for travel in the Forests or open country while subsisting on material furnished by the officer. When otherwise subsisted, expenses on an actual expense basis as provided by the Fiscal Regulations will be allowed."

This means that it is now possible to issue a per diem authorization to any ranger or other officer who is doing pack trip work, and that while on pack trips reimbursement can be secured at the rate of $1.20 per day, although the officer can change to an actual expense basis for any single meal or single day or any length of time that may be spent at ranch houses, hotels, or other public places where regular accommodations are secured.

The inclusion of this paragraph in the letter of authorization from the Secretary to the Forester ends the story of a detail of administration which has been a thorn in the flesh of a good many Forest officers for a long time. There was a time when it was required that expense accounts show the actual cost of the exact articles of food consumed by a Forest officer while on a pack trip. This led to the calculation of cost of sandwiches and spoonful of various articles which are required in small quantity for camp life. This trouble was overcome, but at a later date the so-called rangers' per diem could be granted only to those men whose headquarters were so remote from a supply point that it could be certified that supplies had to be secured in advance and stored at the rangers' headquarters. This of course prevented many men from receiving the benefit of the rangers' per diem arrangements.

The entire Forest Service is now on an actual expense basis except that a per diem allowance may be permitted in a few special instances, such as the one in question, which is to meet the fact that an actual expense basis is not practicable when supplies are used on pack trips.

What is Overhead?

This word "overhead" has an ominous sound and it is right to inquire, as Mr. Benedict of District Five has, whither we of the Forest Service are going along this [illegible] particular trail.

I think it can be easily shown that because a certain man is attached to the District Office or Washington organizations, he does not thereby become an overhead charge.

There are certain classes of work, small on any one Forest or District, but which in the aggregate are enough in amount and importance to keep one man busy, and a man is brought into the District Office - the natural place, because it is central - to look after these jobs.

What is Overhead? (Cont'd)

Is he an overhead expense? The test is easy. Simply ask: Is his work necessary, i.e., would it have to be done by the Ranger or somebody else in the Forest organization? Is there enough of it to keep one man busy? And can some one man do it more efficiently than the many who would ordinarily be required to give it time?

From the answers to these questions, we can decide whether he is overhead or not, and if this test is applied, I think the Forest Service will loom up large against commercial organizations that are rated efficient.

All is not overhead that is centralized.-H. R. Kylie, D-2.

General Condition of the Lumber Market

During February prices of lumber reached heights which were absolutely indefensible from any standpoint. It is undoubtedly true, however, that they reached these levels from conditions of supply and demand. That prices were too high was generally recognized by the fair-minded amongst the manufacturers of lumber. In order to check the sky-rocketing tendencies several of the largest lumber-selling and manufacturing corporations in the United States issued and published widely statements frankly admitting the indefensibility of the prices then obtaining and guaranteeing prices of material sold by them for a period of approximately six months based on January prices which were below gowing prices at the time. The manufacturing industry in general did not follow the example of the few. Nevertheless, on account of the wide publicity given to these statements, not only the immediate patrons of the companies involved but the entire buying part of the lumber industry lost faith in going prices, discontinued purchases, and the immediate demand which had pushed prices up suddenly collapsed. The result was a battle of endurance between buyer and seller such as the lumber industry has seldom, if ever, before seen.

The potential demand was still present. Shortage of lumber was no whit less in March than in February. Building operations were still far behind. It was therefore a question whether the operators could maintain their position without sales until the force of the dammed-up demand broke over. It is probable that the buyers would have weakened first because the manufacturers were in a strong financial position and were glad of a respite to take stock and stock up their depleted yards. Unfavorable weather conditions retarded building to some extent, but this factor was of little importance.

About the time that events were shaping toward the resumption of buying at prices asked an element appeared which had not been reckoned upon by either party. This was the tightening up of the money market which had been gradually coming on. The Federal Reserve Board had greatly increased rediscount rates. A general feeling of uneasiness led bankers to call outstanding loans, and new loans were hard to negotiate. As a result buyers were eager to purchase but were short of money, and manufacturers were becoming more eager to sell but could find no buyers. The result was that the bottom dropped out of prices. As usually happens on a falling market, however, the buyers withdrew waiting for the bottom to be reached. At present prices are still dropping and little business is being done.

The following table shows the mill prices of southern pine for a few representative grades for June, February, and October:

General Condition of the Lumber Market (Cont'd)

Southern Pine	June	Feb.	Oct.
B & Btr F. G. Flg. 1 x 3	$ 86.25	$113.96	$77.50
" " " " 1 x 4	73.80	105.00	74.50
No. 2 F. G. 1 x 3	39.75	56.50	38.50
B & Btr. Dsd. Fin. 1 x 6	85.50	118.00	72.50
No. 1 Dressed Bds 1 x 8	70.61	94.50	58.25
No. 2 " " 1 x 8	35.80	53.25	37.50
B & Btr. Casing and bases	102.00	130.50	79.75
No. 1 Dimension 2 x 6	35.00	49.75	35.50
No. 2 " 2 x 6	30.00	44.00	32.25
No. 3 " 2 x 4 and wider	28.80	32.00	22.50

It should be noted that in the case of lower grade material prices are generally about the October figures, in some cases less than those figures. The higher grade materials are generally still slightly higher than the October prices. The greatest rises in prices since the war took place between October and February.

In the case of hardwoods, prices have held rather firmly with a few exceptions mostly in the lower grades.

The following tabulation shows the retail prices of lumber in Pittsburgh as of March 1, the time of highest prices, and June 15:

	March 1	June 15
B & Btr.F.G. Y. pine Flg. 1 x 3	$162.00	$140.00
" " " " " " 1 x 4	162.00	125.00
Clear Y. Pine Finish 4/4	182.00	158.00
Dimension 2' x 4" x 16'	81.00	70.00
Douglas fir Flg 1 x 3 V. G. 2nd Cl & Btr.	152.00	150.00
" " " 1 x 4 " " " " "	152.00	125.00
Boards Yellow Pine 1 inch Dsd	84.00	72.00

The reduction in these items in the retail trade has been from $10 to $20 and more per M feet. On the other hand, hardwood prices have remained practically unchanged.-S. L. Wolfe.

Real Help from Outside

At the suggestion of District 6 the Forester recently wrote the Goodrich Travel and Transportation Bureau to ask if they would not print fire warnings on the margins of maps issued to automobile tourists. A reply has been received which offers to print the warning and to cooperate with the Service in every possible way. Literature on the recreational development of the Forests is being sent the Bureau and this will be followed by news of the completion of road projects from time to time.

There has also been received from the Matos Advertising Agency proof of an advertisement of a spark extinguisher by the Baldwin Locomotive Works which will appear in lumber trade journals. The words "Forest Fires cost millions a year - don't start one" appear in heavy type at the top and are followed by reference to warnings issued by the Department of Agriculture.

The more of this sort of thing we can get the better and it's pretty encouraging to have a little.

Washington Notes

On July 1 Raphael Zon, at his own request, was transferred from the position of Chief of Forest Investigations to that of Forest Economist in the Branch of Research. From the very beginning the investigative activities of the Forest Service along ecological and silvicultural lines have been under Zon's immediate direction. The Forest Experiment Stations were his creation, and it is due to his clear vision and untiring efforts that the work has gradually developed in scope and efficiency to its present position as one of the fundamental activities of the Service. The expansion of the work, however, has carried with it increasingly heavy administrative responsibilities from which Zon has long wished to be relieved in order to enable him to devote more time to original work. In his new position he will not only handle independent studies in forest economics and silviculture, but will continue to serve as an adviser to the Branch of Research both in matters of investigative policy and on specific problems of importance. Joseph Kittredge, Jr., formerly of District 1 and a captain in the A. E. F., succeeds him as Acting Chief of the Office of Forest Investigations.

E. R. Hodson has been awarded the degree of Bachelor of Laws by the National University, Washington, D. C., after completing a three-year course of night school. Mr. Hodson has also taken the bar examination, but has not heard whether he passed.

S. D. Wells, who has been in Washington for the past week or ten days for consultation regarding the pulp and paper work in the Laboratory, left for Madison July 3.

District Forester L. F. Kneipp has been promoted to be Assistant Forester and will take charge of Lands. Mr. Kneipp is expected to reach Washington about August 1. His successor in D-4 has not been announced.

Forest Products Laboratory Notes

Fire retardent paints are the most practical means so far discovered by the Forest Products Laboratory by which small amounts of wood can economically be made fire resistant. The only other known methods of decreasing the inflammability of wood are to keep it wet, or to inject into it certain chemicals under pressure. These methods, though more effective than painting, are usually either impracticable or too expensive to be considered.

Ordinary calcimine or whitewash has proved in tests to be as fire resistant as any paint covering tried. It is cheap and convenient to use. Although it will not prevent the burning of wood exposed continuously to a high heat, a good coat of calcimine on wood will decrease the danger of a blaze spreading from burning cigarettes, sparks, matches, and similar small sources of fire. Calcimine is, of course, more effective for inside than for outside use.

For exterior use numerous patented fire retardent paints are available. An effective outdoor paint which has been developed at the Forest Products Laboratory consists of linseed oil, zinc borate, and chrome green. This paint has maintained its fire-resisting properties through more than three years of exposure to the weather.

Prejudice exists in certain quarters against the use of timber cut from dead trees, and some purchase specifications insist that only timber cut from live trees will be acceptable. As a metter of fact when sound dead trees are sawed into lumber, and the weathered or charred outside is cut away, there is no method known to the Forest Products Laboratory by which the lumber can be distinguished from that cut from live trees, except that the lumber from dead trees may be partly seasoned when sawed

All the information available at the laboratory indicates that timber cut from insect or fire-killed trees is just as good for any structural purpose as that cut from live trees of similar quality, providing the wood has not been subsequently injured by decay or further insect attack. If a tree stands on the stump too long after it is killed, the sapwood is likely to become decayed or badly infested by wood-boring insects; and in time the heartwood also will be similarly affected. The same thing is true of logs cut from live trees and not properly cared for. Until the wood becomes affected by these destructive agents, dead tree wood should be just as strong and just as durable as sound live tree wood.

In considering the subject it may be useful to remember that the heartwood of a living tree is entirely dead, and in the sapwood only a comparatively few cells are living. Most of the wood cut from trees is dead, therefore, regardless of whether the tree itself is living or not. Such being the case, purchase specifications, instead of providing that material must not be from dead trees, should state that material showing evidence or decay or insect infestation exceeding a specified limit will not be accepted.

District 1 - Northern District

In view of the fact that District 1 has more than 100 years of planting work ahead of it, the possibility of securing restocking within a shorter period than can be obtained by present methods of planting are being considered. The proposed plan contemplates the planting of small blocks of possibly two and one-half acres each at intervals of about five chains over any given burn. This would result in the planting of one-fourth of the area. The blocks would be sufficiently large to establish forest conditions within themselves and the result would be a stand composed roughly of two age classes; one of which, comprising one-fourth of the area, would be 50 years older than the rest. This was based on the assumption that the border trees of the planted blocks would begin bearing seed before their fiftieth year. Such a method is considered applicable to regions far removed from lines of transportation. Sites which are distinctly quality 1 near transportation facilities, however, will have to be completely stocked when planting is done as is now the plan.

District 2 - Rocky Mountain District

District Forester A. S. Peck has just returned from a trip to the southwestern part of Colorado where, in company with Assistant District Forester C. M. Granger and Supervisor Hoffman of the Montezuma Forest, he looked over a magnificent stand of yellow pine on the Dolores timber survey area for which an appraisal is now being prepared.

Consideration is now being given to the best method of marking this timber. There is a splendid stand of reproduction and it seems probable that the marking should be heavier than is usual in yellow pine stands of the southwest.

District 2 - Rocky Mountain District (Cont'd)

A marking board consisting of Mr. C. G. Smith of the Washington office, C. M. Granger and M. W. Thompson of the District office, Supervisor Hoffman and Forest Examiner Easterbrooks is now in the field going into this detail.

Snow is at 10,000 feet on the Durango and general rains throughout southern Colorado on June 26 remedied conditions which were beginning to look serious from the standpoint of forest fires.

The Massachusetts Forestry Association party, touring the National Parks and Forests, reached Denver June 27, headed by the Secretary, Mr. Harris A. Reynolds. The party is very small this year, numbering only about forty. It is understood that the desire to go to Europe, as well as the increased cost of travel generally, accounts for the small size of the party.
Arrangements have been made for Supervisor H. N. Wheeler to accompany the party through the Colorado Forest, and for Supervisor A. Hutton of the Shoshone Forest to give a talk when the party reaches Buffalo Bill's hunting lodge on that Forest on July 8.

The Colorado Agricultural Experiment Station has called upon the Forest Service for cooperation in carrying out an experiment on pasture improvement and handling cattle on about six hundred acres of pasture land belonging to the State. The cattle will be pastured throughout the summer grazing season and handled much in the same way as the Forest Service has advocated in order to maintain carrying capacity and bring about the improvement of pasture land. Information will also be gathered on the gain in weight made by the cattle under different methods of handling and the different seasons of use of the forage. Mr. Lynn H. Douglas, Inspector of Grazing, is working with the officers of the Animal Husbandry department of the Experiment Station in initiating the project.

District 3 - Southwestern District

Using data obtained by the Lincoln reconnaissance, Mr. Westveld is working on a plan of management for 57,600 acres which, it is expected, will enable the Supervisor to locate in advance of application the areas which should be logged and enable him to control and direct the process of selling and the order of cutting with the least possible trouble. While the data available are incomplete use can be made of them in this manner, whereas they might otherwise not be used for a considerable time.

The Carson Pine Cone speaks of a flock of white geese seen on the ponds near Tres Piedras, and says that one which was found dead weighed about eighteen pounds.* This was undoubtedly a swan, as geese do not attain that weight. These birds, once a common game bird, are extremely rare.

According to news clippings received here, a fire was started in the Rincon Mountains a few days ago by the focusing of sunlight through an empty soda-pop bottle. One editor heads the story "Another Argument against Prohibition." Undoubtedly if the fire had occurred two years ago, it would have been blamed on a rum-flask or at least a beer-bottle. Is it possible that soda-pop bottles have acquired evil habits from their former wicked associates? We expect someone to rise and suggest that a fire slogan be blown into soda-pop bottles: "Leave three fingers of pop in the bottom to put out the fire this incendiary bottle is sure to start."

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*A flock of swans spent several days on a pond near Albuquerque last spring.

District 3 -- Southwestern District (Cont'd)

This time it is the Carson! Juan D. Herrera, of Tusas, N.M., recently pleaded guilty to a charge of leaving a camp fire burning on the Carson Forest and was fined $50 and costs. Herrera lost his camp outfit in the fire, and six acres of timber were burned over. Ranger M.M. Bruhl gets the credit for this excellent piece of law-enforcement. Next?

Rangers Ketcham and Crain of the Datil have completed the planting of about 7,000 bush willow cuttings on the Jewett Station. This is part of an experiment in erosion control to prevent the cutting up of the Jewett Station hay meadow by Apache Creek. The willows were planted three feet apart at the base of the eroding bank the theory being that they will cover and bind the bank, cause it to seek an angle of repose, and define a flood channel which will prevent the gullying and depositing of sand promiscuously throughout the meadow. The work was done at odd times and no cash cost was incurred. A ditch has also been cut to straighten the channel and prevent ox-bowing.

A $250.00 reward is offered by the Mogollon Game and Fish Association for the arrest and conviction of the person or persons who dynamited fish in Whitewater Canyon on or about June 12. This is a handsome offer and about correctly proportioned to the heinousness of the offense. Once upon a time, up north, a deputy game warden ran into the camp of a party of fish-dynamiters. Off in the distance, he had heard the roar of an explosion where the dynamiters were at work. He made a neat pile of the grub, tents, beds, saddles, and the rest of the outfit; tamped in a hefty charge of dynamite underneath, lighted the fuse, and left. It is reported that the "anglers" left the country. Here's hoping the Mogollon Association will light at least a legal fuse under the Whitewater outfit.

Trucking on The Tonto

"Twas on a rocky roadway winding up a heavy grade,
With the mercury recording a hundred in the shade;
And the radiator boiling while the driver cursed his luck,
As he rumbled up the mountain with the two-ton truck.

He had drove it over stair steps that were broke in solid rock,
When he heard the differential start to rattle, roar and knock;
While the motor roared a protest that was deaf'ning to the ear,
And the pinon played a second on the beveled driving gear.

So he blocked the wheels with boulders and crawled beneath the bed,
Where with monkey wrench and hammer he worked and sweat and bled;
While the driving shaft was turning but the driving ax was not
And the spider gears were grinding and the engine smoking hot.

After working there for hours he decided he would quit,
A dozen miles from water and so dry he couldn't spit.
So he drained the radiator and when he'd drunk his fill,
He lit his pipe for supper and started down the hill.

As he hoofed it down the mountain in the evening's fading light
He wished that he had started with a load of dynamite!
He could light a fuse and leave it and wish the public luck,
With the fragments they might gather from that two-ton truck."

- Sizer - Tonto.

"Speaking of things that Forest officers are called upon for. As a Carson Ranger was passing a ranch house, he was called in by the rancher and asked to measure the rancher's wife for a corset. The ranger took the measurement, but failed to enter it in his diary, as he didn't know whether to charge it to Improvement (Maintenance) or unclassified. What would you charge it to?"
-Carson.

While the loading crew of the A. L. & T. Co. on the Coconino were away for dinner, a spark from the loader engine fired some slash and two log cars. Elden and Woody lookouts located the fire, and Messrs. Lessel, Kircher, and Kartchner arrived at 2 o'clock. By that time the fire had destroyed the loader, six cars loaded with logs, and three empties, and had burned 10 acres of cut-over land. The fire was not controlled until it had covered about 30 acres. The loss to the company is estimated at not less than $10,000. Prompt action alone saved a serious forest fire, as a high wind was blowing.

Mr. Shepard of this office has recently completed and sent to Washington the new index for the Silviculture Section of the National Forest Manual. This index is in considerable more detail than the old one and is revised thoroughly as to paging. The index to the Grazing Section is well under way. The author states that, although he makes no claim that his forthcoming publication will be a best-seller and does not recommend it for light summer reading, he feels toward these sections of the Manual just as Paul Bunyan's hostler felt about Paul's famous blue ox - that he has gone through the old reptile with a lantern.

As usual, California is busting fire-bugs and other National Forest law breakers with zeal and success. Already this season sixteen cases have been tried, and in all but three convictions have been secured. It is interesting to note that Ranger Reindorp, formerly of District 3, has participated in three prosecutions. Reindorp was unusually successful in law enforcement in D-3.

When a Ranger Station is temporarily vacated, do the local officers always see to it that proper notices are posted for the information of callers, with information as to what to do in case of fire or other emergency business?

On June 11, Ranger Blodgett went to Lake Peak to repair the telephone line, but was unable to do so as on the north side the snow was over the tops of the telephone poles, eighteen to twenty feet deep. While there he was in one of the hardest blizzards he has ever experienced.- Santa Fe.

Preliminary work has been completed upon the fenced experimental plots enclosed for the purpose of studying revegetation upon heavily grazed browse ranges. A few brief details of the procedure being followed in this study may be of interest. Two small spots about one yard square have been located permanently by means of iron stakes within each area. Two similar ones to serve as checks were located outside the fence. These small squares have been photographed and every plant named and identified. By repeating this process twice yearly exact changes in vegetation may be followed accurately. The next examination and mapping will be made in October or November. - Tonto.

District 3 - Southwestern District (Cont'd)

How about taking down these old stained and obliterated metal posters, fire signs, administrative site notices, stock driveway posters, etc., and replacing them with bright, new shiny ones? It will greatly improve the appearance of your District and help convey the impression that you are "on the job."

"Mr. Hughes has completed the work on the Buckman-Frijoles road and is now breaking camp. Ranger Brown will take over part of his equipment for use on the Frijoles-Jemez Springs trail." [illegible]

Does fire publicity pay in the long run? Read this from the Coronado Bulletin:

"Six Class A fires resulted in the Catalinas and Rincons last week from a passing electric storm. One of the fires in the Catalinas was in sight of Tucson and was reported by about twenty different citizens. The editor of one of the local dailies wrote a timely editorial calling attention to the fire danger and suggested that the fire in the mountains would undoubtedly prove excellent fire insurance."

Editor's Note: Presumably the "fire insurance" referred to by the Editor is not a covert advocacy of the value of light burning, but a warning to the hundreds of citizens who saw the blaze to be careful in the woods.

District 4 - Intermountain District

This spring a large number of young black locust and white ash trees, which had been secured practically without cost, were planted at intervals up the Weber River from Ogden at an elevation of 4,500 feet to Kansas Station, an elevation of 6,500 feet, and also at Park City with an elevation of 7,000 feet. While it seems reasonably certain that the high elevations are unsuited for either species, it is hoped that the experiment will give definite information of the approximate altitude at which these trees can be safely planted.

Rabbit damage to planted trees and natural reproduction at the Great Basin Experiment Station on the Manti was excessive last winter, due probably to the long winter and heavy snowfall. On many plantations the entire growth of the last two years has been lost. The terminal bud of practically every tree was eaten off. A few plantations protected by a chicken wire fence came through the winter in exceptionally good shape.

Serious injury from snow smothering to some species occurred at the Cottonwood Nursery this spring, because the snow did not go off until about the middle of May. The injury was especially noticeable in beds of Norway spruce, western yellow pine from the Pacific coast, and Douglas fir. Encouraging results were obtained from the experiment designed to develop a method of protection against this form of injury. A bed of 2-0 Douglas fir on which dead air space was provided under the snow by laying two logs alongside the bed and covering these with 2 by 6's laid across the log showed an almost negligible amount of fungus injury while unprotected beds suffered a very serious loss, and those which had been given a mulch of leaves or hay had a complete loss of all seedlings. It now appears certain that Douglas fir stock can be grown in the locality if given ample protection against snow smothering and protection against late spring frosts.

District 4 - Intermountain District (Cont'd)

A former Ranger on the Boise, Chas. T. Gray, now engaged in in the sheep business, passed through Idaho City a few days ago, dressed of course in chaps and spurs, if not the cuffs and sombrero, and his outfit was spied by two small boys of the town. "O, Don," shouted one small wit to the other, "com'n see the cowboys." Up the street the other came tearing until he came in sight of the cavalcade, when he stopped in disgust. "Aw, Walter," he exclaimed as he turned away, "them ain't cowboys, them's SHEEPHERDERS!

O. G. Nielson of Salina, Utah, formerly connected with the Forest Service and now in the hardware business in this city, returned from Fish Lake today with a twenty-six pound Mackinaw. This is the largest fish caught at the lake so far this season. It measured 41 inches from tip to tip.- Fishlake.

District 5 - California District

The Forester has approved a recommendation of the District Forester that, effective July 1, the Branch of Public Relations be established in this District. R. F. Hammatt has been promoted to be Assistant District Forester and will be in charge of the office.

The Trabuco Camp Ground on the Cleveland is proving to be popular and is used by a considerable number of people. There have been about 50 machines parked there every Sunday. During June the Sierra Club spent a night at the camp and on the following day about 40 members hiked to the top of Trabuco Peak.

District 6 - North Pacific District

The desirability of developing some marking plans which will take into account the frequent occurrence of violent storms similar to the one which occurred on April 2 is now in consideration. The storm referred to blew down over five million feet of timber in a stretch of country approximately 15 miles long on the west shore of Upper Klamath Lake. The damage was severe on timber sale cuttings, but virgin timber was also blown down. Approximately 2 million feet, consisting of virgin timber, was lost, of which 1,200,000 feet was thrown down in a solid stand only 250 acres in extent. The storm was said to be the worst in the last 25 years. If similar storms could be expected to occur with no more frequency than every twenty-five years, no concern about cutting methods would be necessary. Within the last five years, however, there have been two other storms which have blown down considerable amounts of timber reserved for seed tree purposes. It is obvious that some method should be developed which will reduce this loss to a minimum.

The Oregon air patrol started on June 26. At the Portland sub-base fliers of the forest patrol will use the East Moreland landing field which was used last season. From the sub-base at Medford, one plane will patrol south to Red Bluff, California, and the other will operate between Medford and Alturas, Calif. At Eugene the base, the municipal aviation park will be used as a landing field. Captain A. D. Smith will have charge of the patrol.

[illegible] Service had a float in the [illegible]

District 6 - North Pacific District (Cont'd)

George M. Cornwall, editor and publisher of The Timberman, Portland, Oregon, and J. H. Bloedel, president of the Bloedel-Donovan Lumber Mills, Bellingham, Washington, represent the status of this district on a committee of men acquainted with the work of the Forest Products Laboratory which is arranging for the Decennial to be held at Madison July 22-23.

The Forest Service had a float in the floral parade that opened the Portland Rose Festival on June 24 that was an honorable mention badge. A 2-ton Pierce-Arrow truck, lent by the Bureau of Public Roads, was used as a base, on which was built a camping scene. There was a log shelter, in front of which was a real campfire. Two girls sat before the fire frying fish. A string of fish hung on one side of the shelter, while a woodpecker, clinging to the side of the shelter, peered around at the campers. Two of the new cardboard campfire notices were posted on the outer walls of the shelter. Fishing tackle, a bed roll, cooking outfit, and camp axe completed the scene. The sides of the float were covered with moss, over which was a mass of rhododendron, both gathered on the Oregon National Forest, near Twin Bridges. A large Forest Service shield covered the front end of the engine. The float was made possible by the hearty cooperation of the Bureau of Public Roads.

Conservator of Forests H. J. Sankey, of the British Colonial Government of Nigeria, West Africa, spent from June 21 to 26 in this District studying logging methods, etc. He put in two days in Wind River Valley, visiting a large timber sale, the Experiment Station, and nursery; then went to the Deschutes to see the operation of the two logging companies there. He says that in Nigeria there are no forest fires, but that this advantage is somewhat offset by the disadvantages of tropical heat, incessant rain, tsetse flies and other noxious insects, snakes, and animals.

A photograph taken by Supervisor C. H. Park, of the Washington, submitted by District Forester Cecil, won the first prize ($50) in The Portland Telegram's recent contest for amateur photographers. Mr. Park's winner, "On the summit of the Cascades," was taken at Whatcom Pass, Washington. It shows a mounted horseman leading a packhorse, pausing at a stream, whose clear waters mirror the group. The Cascade Mountains are in the background. The Telegram said of it: "It won instant favor with the judges, both for its great artistic value and for its photographic excellence." There were more t 22,000 entries in the contest.

The Forester and Congressman G. N. Haugen, Chairman of the Agricultural Appropriations Committee, arrived in Portland on the evening of June 25, to spend a few days in going over in the field the work of the Service. After a few hours in the District office on June 26, they left for Wind River, where they looked over timber sales, road construction work, and the Wind River Experiment Station and Nursery. From Wind River they went to the Whitman Forest, where timber sales, private cuttings, and fire protection systems were seen and investigation of grazing conditions made. The trip wound up by a visit to a fire lookout. They were accompanied by Messrs. Cecil, Ames, Kavanagh, and Munger.

District 7 - Eastern District

I. F. Eldredge has recently returned from a trip to the southern Appalachian Forests. He reports that the feeling among the field men is distinctly optimistic and that everybody is very much alive and on the job.

About 25,000 trout fry were planted in the streams of the Natural Bridge National Forest during the past spring.

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

July 12, 1920.

Possible Ways of Reducing Routine

In the note by the editor which accompanied Mr. Barnes' article, "Lightening the Load", in the last issue of the Bulletin, a brief explanation was made of the discussion which led up to the request by the Forester that Mr. Morrell and Mr. Reed investigate and report on possible methods of reducing routine work. It appears, however, that in printing Mr. Barnes' story without telling in more detail what recommendations were made, we got the cart before the horse. Consequently it seems desirable to give the entire report in order that all who are interested may read and, perhaps, argue the matter.

Following the report there is a brief, but very much to the point, memorandum from Mr. Carter. Undoubtedly there will be others. All of us have cussed at what seemed to be needless routine. Most of us have felt at one time or another that we could tell those guys at Washington how to save time and work if we only had the chance. The chance has come. Do the recommendations in the report point a way for a substantial reduction in routine work? Are there other lines of non-essential work which should be dropped? What are your pet schemes for slashing red tape and handling the work with the least possible effort? This is an opportunity that the soap box efficiency experts have never had before and will probably never have again.

The Report

The best measure of where we stand in ability to do work is in the man power available. Comparison of our financial condition is therefore made on this basis rather than on that of dollars allotted.

As a basis for comparison, a study of the man power available in District 2 in 1915 and the work to be done during that year, as contrasted with the man power available and the work to be done in 1921 has been made. Allowance for the transfer of the Bridger Forest and elimination of the Kansas has been made in this calculation. Otherwise the District is the same except for some minor eliminations. Plans for administration and district policies are likewise similar. It may be assumed that what is true with reference to District 2 is in a large measure true for the other Districts.

Following is the comparison of the man power on the Forests of the District for the two years:

	1915	1921	Per cent Inc. or Dec.
Supervisors	29	27	-7
Deputies	8	4	-50
Forest Examiners & Forest Assts.	30	14	-53
Rangers	200	181	-9.5
Clerks	34	41	+20
Guards (expressed in man years)	30	21	-30
Percent decrease in supervising force			-32.8
Percent decrease in yr. long force			-11.3
Totals	330	288	-13

Following is a similar comparison for Fiscal Years 1920 and 1921:

	1920	1921	Percent Inc. or Dec.
Supervisors	27	27	0
Deputies	7	4	-40
F. E. & F. A.	17	14	-18
Rangers	188	181	-1.6
Clerks	42	41	-2.5
Guards	28	21	-25
Percent dec. in supervising force			-12
" " " yearlong force			-5.7
Totals	309	288	-6.8

In both tabulations employees have been classified according to duties rather than by titles.

Statistical data showing volume of business handled in the years 1915 and 1919 give the following facts regarding increase in work:

	1915	1919
Timber cut	94858 M	96535 M
Cattle & horses grazed	411195	534222
Sheep and goats "	1107127	1468419
Special uses issued	858	403
Free use issued, cases	6287	4930
Noncommercial sales, cases	536	403

Using a converting factor based on the activity cost records for 1917 as a means of finding a common expression for the quantity of work, we get a total increase in these major lines of 9.6% for the four-year period. Assuming that business increases proportionately in 1920 and 1921, we will have 14.4% more work in 1921 than in 1915.

Putting this alongside of the available number of men we have for the period 13% less men and 14.4% more work, or a discrepancy of 27.4%.

These figures are, it is believed, a sufficient warrant upon which to base a most careful and far-reaching consideration of the question whether the field force can continue to do the present work and take on continually more, and if it can't, what is to be done about it.

The following ways of meeting the financial situation naturally present themselves:

1. By increase of efficiency
    (a) Through raising the personal efficiency of the force.
    (b) By bettering organization, or
    (c) By improving methods.

2. By cutting out unnecessary work.

3. By refusing new business.

Whether one or all of these lines are adopted as a means of meeting the situation, the problem needs the attention of all members of the Washington and District offices in executive positions, or who may be able to add something toward its solution. If it is to be met by raising personal efficiency then the Supervisors should have assistance in the task in such ways as: outlines for plans of work; outlines for inspection; methods for scheduling work, etc. If by bettering organization, the ways of doing so should be pointed out.

If by improved methods, there should be an investigation to determine what can be improved and how; existing instructions should be changed where necessary, and Supervisors given as much leeway as possible to work out their own problems.

IF NONESSENTIAL WORK IS TO BE ELIMINATED IT MUST FIRST BE DEFINED; DEFINITE AUTHORITY ISSUED TO DISCONTINUE IT, ADEQUATE STEPS TAKEN TO SEE THAT IT WILL NOT BE REVIVED OR THAT OTHER NONESSENTIAL WORK WILL NOT RISE UP TO TAK ITS PLACE, AND HOW MUCH SAVING WILL BE EFFECTED BY ITS ELIMINATION.

If we are to meet the situation by refusing new business, that term also needs definition and the limits to which we should go be set. If, for example, permittee A, who is using a certain piece of range drops out, is B, a new user's application for the same range, new business which may be refused to cut down the total, and shall we in any case refuse new business in the form of grazing applications not in excess of the carrying capacity of the range?

It is not believed that the problem can be met by increasing personnel efficiency alone, or by that and changes in organization. (Reference is made to Morrell's organization study from which it appears that the rather common view that large units mean greatly reduced expenditures is an erroneous one). Neither do we agree that all nonessential work should be eliminated or all new business refused, without first making an exhaustive effort to devise new methods, or change existing ones, if and insofar as that can be done without lowering the standards of forestry practice or of public service in such ways as to interfere with the things that are a vital part of the program. For example, it may be said that grazing studies are a nonessential, but it may easily be that grazing studies now that will point the way to a better management of large areas of grazing land next year or in five years from now, may do more real good, and therefore be considered as more essential than the making of an annual report on grazing administration by a Supervisor on whose Forest the work is being well administered, and there is not much to do in the report more than to say how it is being accomplished. On the Appalachian Forests in District 7, where the use for grazing has a most important bearing on the question of silvicultural management, grazing studies may easily be a more essential activity as measured by its value to proper silvicultural practice than is the scaling of logs on some small sales in District 2 rather than to sell the timber by estimate.

A study of a Forest by an engineer to determine how areas in heavy demand for recreation may be classed as nonessential but like the grazing studies, may easily contribute more even within the next year or two toward the proper management of the Forest, by deciding before it is too late such points as where summer homes should be placed, how sanitation and water development should be provided, and other things of like nature, than will the same money spent on accurately surveying, mapping and marking special use areas under temporary occupancy, making reports on such use, or paying attention to small illegal inclosures which are doing no damage to the Forest. As an example, an area in the Colorado Forest being developed by the city of Fort Collins and residents of that vicinity may be cited. Permits for some summer homes were issued on a portion of the area where the Supervisor thought this could properly be done, and improvements were constructed. An examination of the area by the Recreation Engineer disclosed the fact that by allowing these permits the satisfactory development of the whole area has been seriously interfered with. But the permits cannot now be cancelled. It cannot be said with positiveness that it might not have been better to give the Supervisor with 13 years' experience in the handling of sales, grazing and other established work, more final responsibility in these lines and to have used the money spent on supervision along these lines to employ the special service now given along the line of recreational development. And to cite District 7 again, a recreation engineer may be more needed for proper guidance in the handling of present use of this nature in the small areas adjacent to the heavily populated Eastern country than is a man to check scaling or to pass on the Supervisor's action in expenditure of funds, or care of equipment in the western districts.

Another need for taking stock of the ability of the field force to perform the necessary work is the fact that if it is unable to do all of the work in the manner expected, those lines of work for which there is a more definite accounting will receive attention out of proportion to those with less fixed requirements. For example, a ranger with a number of scattered sales, where there is a contractural or instruction requirement for scaling at fixed intervals will comply with these requirements rather than give adequate supervision to grazing or do desirable fire patrol. Or a Supervisor faced by the necessity of submitting an annual grazing report by a fixed date will make that report rather than make field inspections of the range. So if we are to do only essential work we need to define more definitely the standards for doing it, determine whether these standards can be met, and if not, what adjustments are to be made.

How to proceed, if it is necessary as we believe, to cut down the quantity of work, or at the least to stop its increase, is a question to be decided by the Forester, and his immediate assistants, probably after considering suggestions from the District or Supervisory force. The above analysis and the following suggestions are not expected to do more than start the discussion.

Possible Ways of Reducing Cost by Change in Methods

It is believed that to make progress along lines of economical administration, this question should be put and kept squarely before every member of the organization:- "Is what you are doing or buying worth what it costs?"

Some things find their justification wholly, or in part, on other than financial grounds. But others must be justified alone on what they are worth in dollars. It is a business adage that a method of accounting the cost of which exceeds the possible loss sustained through a cheaper and less accurate one, should not be adopted.

Cost figures show that in District 2 the average cost of administering timber sales is about $1.00 per M. This figure should be further loaded by a share of the cost of building and maintaining ranger station improvements. A large percentage of the total cut is from small scattered sales which cost probably not less than $2.00 per M. The average price per M is probably about $2.50. A very large per cent of this cost, probably 50%, is chargeable to scaling. On this assumption we spend 40% of what we get in "counting the money." Scaling logs at the mill yard or on skidways in the woods does not in itself contribute much, if anything, to silvicultural management. The Government would not lose 40% of its receipts by selling by estimate. Any concern handling the work on the basis of financial return would be forced to adopt a less costly method. Similar comparisons might be drawn with reference to methods followed in some other lines of work.

Following are suggested ways in which the cost of doing work might possibly be cut without serious detriment to final results:

Possible Ways of Reducing in Routine

1. Make it a matter of practice to handle Class A sales by estimate whenever the chances of monetary loss are not greater than is the cost of scaling.
2. Insist on extension of authority in making sales to Supervisors and cut out review of papers in District Offices.
3. Discourage maps in Class A and B sales.
4. Make it a matter of practice not to allow cutting reports on A sales till cutting completed.
5. Simplify appraisals on all small sales.
6. Eliminate annual grazing reports except in special cases and handle matter by group conferences with Supervisors by Assistant District Foresters similar to allotments.
7. Emphasize that stock need not be counted unless special reasons for so doing.
8. Change requirements that all sheep should be counted.
9. Slackening up in plans for salting stock.
10. Less attendance at stock meetings, advisory boards, etc.

11. Cut out maps on Form 964 except in term permits.
12. Secure amendments to property regulations.
13. Drop present so-called cost keeping.
14. Insist on extension of authority to Supervisors in transfer of funds between suballotments and in authority to transfer between approved improvement projects or to start new ones in lieu of them.

F. W. REED
FRED MORRELL

Carter's Reply

The recommendations of the Reed-Morrell report as regards timber sales are.

1. "Make it a matter of practice to handle Class A sales by estimate whenever the chances of monetary loss are not greater than is the cost of scaling."

This recommendation can hardly be considered as calling for action by the Forester, especially if the intent is to retain scaling in such sales if it involves no real cost, i. e., if such a sale can be handled as many are, without any real loss of time on the part of the Ranger. It is really a recommendation to Supervisors to take greater advantage of the instructions on page 67-S under the general heading "Class A Sales," which are: "Sales may be made by estimate:

1. When acceptable to the purchaser.
2. When it will effect a material saving in the time of Rangers or be of decided convenience to purchasers, as in sales at long distances from Rangers' headquarters.
3. When previously approved by the Supervisor as to particular classes of sales or localities or in individual cases."

This whole question of scaling has another angle which should be considered. The fact that we do, normally, scale our timber has quieted unintelligent but earnest criticism repeatedly, has helped carry the Service through some stormy times, and will do so again. Once more, it has helped establish good relations with purchasers, irrespective of the size of their sales, since they "pay for what they get," no more, no less. These advantages must not be overlooked in an ambition to handle more business with less funds.

2. "Insist on extension of authority in making sales to Supervisors and cut out review of papers in District offices."

If I understand this recommendation correctly, it is again aimed essentially at the District offices rather than at the existing instructions. Within the limits allowed by Regulation S-19, the authority extended to Supervisors is wholly a matter for the District Forester to decide and this is done on the basis (a) of the relative importance silviculturally and economically of sales of different sizes on different Forests, and (b) on the relative ability of the Supervisors to redeem the responsibility placed upon them. It is absolutely true that we have some men in Supervisors' positions who are incapable of redeeming large responsibilities in this line of work from lack of familiarity with the work in sales, especially on those Forests where timber work forms a small part of the total. This has, I think, been recognized by the District Foresters. In other words, the answer to this recommendation is to be found in the quality of the Supervisor material.

There may be opportunity for cutting out the review of the papers in Supervisors' sales by the District office. This is wholly a question as to whether the Supervisors at any given time are prepared to handle the work efficiently. Under the existing instructions on page 69-S, the contract and bond in Supervisors' advertised sales are submitted to the District Forester for review after execution and approval, in order that weaknesses may be pointed out and repetitions provided against. This is a matter on which some very slight saving may be made if conditions are really ripe for it. Whether or not this small saving can be made without incurring too great loss is, once more, dependent on a real efficiency of the Supervisors and of their forces. This matter will be considered in the pending revision of the Silviculture manual.

Incidentally, the Forester has already approved a proposed modification of Reg. S-19, which will increase substantially the maximum authorizations to make sales which may be given District Foresters and Supervisors.

3. "Discourage maps in Class A and B sales."

I believe that all that is necessary on this is to quote the Manual, top of page 18-S, "Maps are unnecessary in Class A and B sales unless desired by the Supervisor for Atlas data. Whenever such sales are made, however, the area will be indicated approximately on small-scale location maps in the Supervisors' and Rangers' records. Maps may also be omitted in the discretion of the approving officer in sales of dead timber."

4. "Make it a matter of practice not to allow cutting reports on Class A sales until cutting completed."

Here again we have a recommendation which could be rephrased, "Take full advantage of the present instructions in the Manual in regard to submission of cutting reports in Class A sales." The Manual instructions, page 62-S, read: "In unadvertised sales only the final report need be submitted to the Supervisor." Also on page 67-S: "Unless required by the Supervisor, cutting reports (Form 820) need not be submitted until the sale is ready for closing." Obviously, under the general heading of Class A sales, there will be times when an intermediate report is necessary and can be called for. The recommendation, however, needs no further comment.

5. "Simplify appraisals on all small sales."

I wish the writers of the memorandum had been more specific in this matter. Just what do they mean by "small sales?" It has been my observation that the appraisals in the case of unadvertised sales never have amounted to much. We have constantly urged the Districts to secure and issue to Supervisors standardized data for use in appraising advertised sales which the Supervisors are authorized to handle themselves and to a considerable extent this has been done by Districts or for regions within Districts. Frankly, I find myself at a loss to discuss this recommendation intelligently, since if it calls for a simplified outline of appraisal, this hardly seems possible, and if it means to simplify the work of making the appraisals, the existing instructions urging the use of standardized figures applicable by regions and types is a matter which is already before the Districts.

E. E. CARTER

Assistant Forester.

Merrill Leaves Forest Service

O. C. Merrill, Chief Engineer of the Forest Service, has been appointed executive secretary of the Water Power Commission and submitted his resignation effective June 30. The appointment was not unexpected, but it came sooner than most people thought it would.

Merrill leaves us for a bigger and a better job. We are sorry to see him go but are mighty glad he has received the recognition due him for his work along water-power lines. He has undertaken a big job but he can handle it. We only wish the salary were commensurate with the responsibility.

Ever since 1909 when he became associated with the Forest Service as District Engineer in District 5, Merrill has taken a leading part in studying the question of what should be done with the Nation's waterpower resources. He developed improved methods for handling waterpower matters on the National Forests, eliminated existing defects in procedure, and put the work upon a basis which won the approval alike of practical engineers and devoted conservationists. The policy outlined by the regulations issued at that time (1910) has been followed ever since by the Department of Agriculture. It was the first step toward a National policy of waterpower use. There was, however, need of legislation by Congress. This was not easily secured. From the start Merrill assisted in the agitation for better legislation, and as year after year elapsed with no action by Congress, his efforts became greater. Many ascribe the final success largely to him.

Merrill will be missed personally, for his friends are everywhere. He will be missed as Chief Engineer for he has built the engineering organization from minor participation in Service affairs up to an important branch. We are thankful he is not leaving the Government service for we could ill afford to lose a man so thoroughly in touch with the engineering and associated activities of the Federal bureaus.

T. W. NORCROSS.

A Close-up of the Washington Office

After nearly 14 years in the field, I have had the opportunity of working as a member of the Washington Office. Though this period in the Washington Office extends but a little over a month, one month's time under these conditions is worth a good deal more than the same period of time on detail. A better insight into the workings of the machine is obtained when you are a part of that machine than when merely looking on.

The Forest Service has always prided itself upon being a very democratic organization but of late years I believe the feeling has grown up to greater or less extent that this applies chiefly to the field force and that the Washington office is inclined to be more or less autocratic. I have been impressed by the consideration given all recommendations received from the field and by the effort made to meet the demands. Also, I sense a spirit of determination at this end of the line to put the Forest Service on its feet and a willingness to take whatever chance is involved in order to accomplish that result. Whether or not this is a new spirit I do not know but it is encouraging. In my opinion what is needed now is a strong backing from the field. Do not be afraid to come back if you believe decisions or policies as now expressed are based on inadequate knowledge of the facts as they exist, or to make any suggestions for the betterment of the Service or for changes in procedure. Get as many of such suggestions as possible in concrete shape whether they involve new legislation or changes in the fiscal regulations and send them in. With the spirit pervading the Washington office any plan which seems to "promote the general welfare" is going to receive very careful consideration. More help from below is the need.

JOHN F. PRESTON.

What is a Fair Day's Work at the Typewriter?

Every one knows there is a great difference in the output of work by different typists, but few people can say what a fair day's work is or whether any specific worker is regularly turning out a fair number of pages. The contrast between the concentration of average clerical workers in the Service and in private offices is not favorable to the Forest Service. In the following table the figures in the column headed "Standard" are based on data obtained from the Bureau of Education, the Bureau of Efficiency, and several local commercial houses. Data in "Forest Service" column are the result of a careful record of work done in the Washington Section of Stenography and Typewriting, and observations of stenographic work done in other sections. In the latter instance, of course, the figures are not conclusive, but I am confident that they are reasonably accurate.

Kind of Work (Double space - 8 x 10½)	Standard (Pages)	Forest Service (Pages)
Copying from plain copy	40-50	25-50
Copying from rough draft	25-40	15-35
Transcribing from stenographic notes	30-35	20-35
Cutting stencils from plain copy	25-35	25-40
Cutting stencils from rough draft	20-30	20-35
Tabulating - ordinary tables	...	15-20
" complicated tables or technical matter	...	10-15
Comparing (2 persons)	...	115-140
Mimeographing (one machine, average 200 sheets per stencil)	15,000-20,000	8,000-11,000

These figures indicate that the Forest Service is above the average on stencil work. This is probably due to the fact that we have enough of such work to keep one operator busy all the time, and it has been the practice to give all such work to the same operator. In this way we have developed some very expert stencil cutters. Incidentally, the best one we ever had resigned recently.

The maximum figures are, of course, the work of old hands and would seem to indicate that the figures in the standard column are not beyond our reach or too much to expect. Our minimum figures are very low but not surprising. Neither are they due entirely to such things as lack of office discipline or morale or irregular flow of work to be done. They are largely owing to the inexperienced and inexpert help that we are obliged to take on at the salaries available. However, the point to my mind is that we have people who are able to meet the standard without undue effort, from which it is evident that the standard is not so high as to cause any particular strain to meet it.

ROY HEADLEY.

Too Many Inspections?

In connection with the discussion in the Weekly News letter on District and Forest overhead, some officers have questioned whether the frequent detailed inspections by District officers are required. The policies of the Forest Service are now fairly well established and if the organization can be considered sufficiently stable, is it not possible that further delegation of authority can be given the Forests and a saving effected which can be used on the Forests in advancing the several lines of work which are now so badly handicapped by shortage in appropriations? Perhaps it is first necessary to decide which is the more important; to push the work on the Forests or for the District office, to keep definitely in touch by personal inspection with all lines of work being done. Perhaps a reduction of inspections to particular problems or questions might be substituted for the present system, such inspections to be handled by one man and the visits of several officers to one Forest in the same year eliminated.

HILTON.

(This is a new angle on the matter of inspections. Most Supervisors complain that District and Washington officers don't get around often enough to keep fully informed of conditions on the Forests. It is a question whether the saving effected by a reduction of inspection would offset the loss of personal contact with field conditions. Possibly the question raised by Mr. Hilton is one which should be looked into more carefully. - Editor.)

Economy in Freight Shipments

Care and a little headwork in bunching freight shipments to the same points will oftentimes make it possible to effect a saving in freight charges, according to Accounts. Several instances have been noted recently of shipments from a central office to different Rangers at the same destination, each shipment on a separate bill of lading. Some of these shipments were for less than 100 pounds but were charged for at the minimum of 100 pounds. In other words, the cost of two shipments was twice what it would have been if only one bill of lading had been used. How about putting shipments of this kind on the same bill of lading and having the Rangers whack the material up when they get it?

Consolidations of Forests

Many expedients have been developed to enable shrinking appropriations to cover increasing volumes of work, and among these expedients are consolidations of Forests. The consolidation of the San Juan and Durango has just been approved in District 2. The Fishlake and Fillmore have been united under the name of Fishlake in District 4, and the Wyoming has been divided between the Bridger and the Caribou in the same District. Consolidations were authorized last spring of the

St. Joe and Coeur d'Alene with headquarters at Coeur d'Alene; the Kaniksu and Pend Oreille, with headquarters at Sandpoint; the Blackfeet and Flathead, with headquarters at Kalispell; the Lewis and Clark and Jefferson, with headquarters at Great Falls; the Missoula, Lolo and Bitterroot were united into one huge unit which presumably can be handled successfully as one unit because its headquarters are at Missoula where the supporting influence of the District office can make itself felt.

Standardization that Pays

That standardization pays under certain conditions was shown in connection with bids for porcelain insulators for the fiscal year 1921. The first bids received were as follows:

District 1 model, for delivery at	Portland,	$132.18 per M.
" 2 " " " "	Los Angeles,	$100.20 per M.
" 6 " " " "	Portland,	$120.00 per M.

All of these bids were rejected because they were considered too high. The Districts were communicated with and the agreement was reached to order one model, that of District 1, in white instead of brown porcelain. The estimated need was 41 thousand insulators, an amount of sufficient size to interest a number of contractors, and new bids were requested on this basis. Instead of having the contractor indicate a price for delivery of supplies over a period of 12 months, provision was made that the orders for the entire year's supply would be placed at one time, delivery to be made within a specified period. This provision appealed to the manufacturers on account of the unsettled conditions with which they have to contend.

In response to the second call the Imperial Porcelain Works of Trenton, N. J., submitted the low bid of $70 per thousand. The difference between this price and the quotations on the various models received on the first call for bids is considerable and well justifies the effort which was made.

Are We Making Wobblies out of Working Men?

From D-1 Fire Journal -
Prof. T. C. Spaulding, U. of Montana.

Being out of the Service sometimes has its advantages, since it enables one at times to hear bits of constructive criticism of more or less value in the solution of knotty phases in the fire game. This happened to me the other day.

As you well know, a large number of the "dry land farmers" employed in fire suppression last season came from the Great Falls-Havre region. I happened to be in that section a few days ago and while talking with one of the leading business men of the region, who had known me as a Forest Supervisor, he said:-

"The men who left this country last summer to fight fires will never take on that job again."

"What was the matter? Didn't they like the job?" I replied.

"It wasn't a question of liking the job. They went up there expecting to work hard, to undergo hardships, if necessary, and to give the best that was in them, for they needed to carry themselves and family through the winter and to purchase seed this spring. Most of them stayed through the season, but they won't fight fire again."

"What was the trouble?"

"Some complained a little on the time, a few others on lack of accommodations, bedding, etc., but the great kick and the only one really justified, in my opinion, was that of the treatment they received from the bosses. These farmers are white men and expected to be treated as white men. They say they were treated worse than bohunks. They expected to work and work hard. I don't know whether they did or did not. I do know that they say they will never go back and I think they mean it. The Forestry Reserve people have lost a lot of good fire fighters."

This business man summarizes well the sentiment of the ex-fire fighters. Everything was all right except the personal treatment. One said to me:-

"I'm not a bohunk and I'll be --- ------ if I'll be treated like one by anyone."

Another:- "The older heads among the bosses and some of the older rangers were all right. They expected a day's work and got it and treated us like men, but I'm not going to take a chance again even if I get burned out this year."

I wonder if this heartfelt criticism indicates in part the reason of some of our labor troubles. I wonder if the nervous tension and the strain of continuous exertion made us irritable and irascible. Something went wrong. Was it because we couldn't handle that class of men? Was it because we forgot there was a greater difference between a bunch of sheep and a bunch of fire fighters, than the mere ability of one of the latter to answer 'here' to his name and to prefer bread ~~for~~ to fireweed? Did 'Wobblyism' blind us to the fact that all men were not 'wobblies'? How many of us have ever taken a half hour off to find out how the men were coming on; if they were making the best of things; of even knew how to accommodate themselves to foreign conditions. How many 'wobblies' did we make last summer? How many of us know the effect of a word of commendation or can distinguish between personal interest in a man and 'familiarity'? After all, how many of us really tried to get the best out of a crew? Somebody got the maximum amount of labor out of these dry land farmers, but he didn't get the best out of his crew, for they have neither confidence in him or that which he represents - THE SERVICE.

A New Creed for the Nebraska

"And the parched ground shall become a pool and the thirsty land springs of water."

To anyone familiar with the early settlement of the sandhill region in western Nebraska and who knows the trials of the settlers in this dry land where fires annually burned over the none too heavy vegetation and where long horned, long legged cattle ranged back and forth, the announcement of a formation of a new stream would come as a fulfillment of the prophecy of Isaiah quoted above. It is the experience of but few in a lifetime to witness such a change in the topography of a region as would bewilder the wanderer returning to his native haunts after a few years' absence. And yet this is the experience of Ranger John G. Lord, who is now completing his thirteenth year in charge of the Niobrara Division of the Nebraska Forest.

Prior to the time that Ranger Lord entered the Service, he was a cowpuncher for some of the so-called "outlaw cattle barons" who fenced the public domain, as a result of which, thru investigations ordered by former President Roosevelt, some of them served terms in the federal penitentiary. In those days the watering places were few and far between. The ranches west and south of the Forest cut immense quantities of hay in the wet meadows, and the transformation from long horned steers to excellent herds of grade or registered cattle of Hereford, short horn or polled Angus breeds was under way. About ten years ago ranchers noticed a slow but gradual increase in the size of the lakes which bordered most of their hay meadows. No matter if the season was wet or dry, an increased area of land was annually flooded. The idea prevails locally that the water has raised in the lakes because of seepage from the North Platte Irrigation Project, but this does not seem plausible since the reservoir is 150 miles away. It is probable that this region is now passing thru a cycle of wet years but the records have not been taken long enough to indicate this.

In 1915, which was an unusually wet year, the condition became serious, and, as a last resort, ranchers combined to dig an outlet for the Diamond-Bar lake which is close to the west boundary of the Forest and the last one of a chain of lakes extending west of the Forest for ten miles. The natural outlet was into the Forest and past the Lookout Ranger Station and thence northeast. Considerable ditching was done and this was discontinued after the water had reached an irregular shaped valley where it formed a lake of about eighty acres in area. An amusing sight in this lake is a windmill tower sticking out of the water like a lighthouse.

In April, 1916, the overflow from the lake had reached a sand desert of about twenty acres that was started by the cattle milling around an old watering place. Here the overflow disappeared in the white sand. The stream has continued to run since then, and during the summer of 1919 which had the lowest precipitatio of any growing season for the past seventeen years, the stream flowed thruout the season except near the sand dune. This point is about a mile from a drainage course called Steer Creek, which is dry except for about two miles from where it flows into the Snake River on the east boundary of the Forest. Two feet of snow in April and about five inches of rain in May of this year, have provided enough water to carry the new stream into Steer Creek, and as the high places are gradually washed down and the sandy bottoms mucked over with silt, there will eventually be a continuous flowing stream fifteen miles long across the Forest. At this writing (June 15) a good sized stream is flowing across the Forest, a deep channel has been made and from present indications the stream will be permanent. This has been, and will continue to be, a great asset to the grazing permittees on the Forest as it will mean closer utilization of a large part of the range and the elimination of a number of wells and windmills along this stream course.

Of interest is the change in vegetation along the upper limits of the creek. Willows have started to grow along the stream banks; sedges and rushes are appearing in the marshy places. Many wild ducks nest around these lakes and streams, and in the fall of the year millions of them stop off here making this a wonderful hunting region. The lowly carp thrive in the lakes and each spring migrate down the creek. As the water lowers during the summer they return again to the big lakes and in places where the stream is shallow one can see the fish passing along in countless numbers. Some thrifty settlers who claim to have invented a process of pickling carp so as to make them edible drive to this stream annually and load their wagons by catching the fish as they flop thru the shallow places. The fish are taken to their homes and prepared for winter use.

FRED R. JOHNSON.

Washington Notes

Word has just been received in Washington of the death of Herman L. Tucker, a former member of the Service, in an airplane accident in California. The details of the occurrence are lacking. To those of the Service who knew Tucker personally the news will come as a distinct shock. He had a personality that held his friends to him through thick and thin. No man ever had the spirit of adventure more thoroughly developed in him or ever obeyed the call of the wild more joyfully than he. An account of his goings and comings reads like fiction. He was a brave man and bold, and the manner of his death was in keeping with his spirit.

District 1 - Northern District

A special recreation map for the Davenport Hotel at Spokane has been completed, showing many attractive trips for tourists in the vicinity of Spokane on the Kaniksu, Pend Oreille, and Coeur d'Alene National Forests. Another recreation map covering the "Quadrangle" - Missoula, Kalispell, Great Falls, Helena - has been completed and will be forwarded to Washington to be incorporated in a booklet descriptive of this area which embraces some of the best hunting, fishing, and camping to be found in this District.

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"The sheriff of this county is looking for me for driving a 'bug' without a license. Will you please arrange to have one issued and forwarded to me?" says a S.O.S. call from Jean Ewen.

N.B. Forest Officers: You might just as well "come through." If Jean can't get by, no one can.

District 3 - Southwestern District

The Santa Fe movies have been shown at Santa Fe, Albuquerque, Tucson, Phoenix, Prescott, Taos, and Las Vegas. It is regretted that they could not have been exhibited at every Forest headquarters; but the limited time the films were at our disposal made this impossible.

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The Indian Service has brought a hornets' swarm about its head through the announcement of a prospective sale of timber in the Mescalero Apache Indian Reservation in the Sacramentos. Agitation for a National Park for these mountains is taking a leading part in the discussion to which Southwestern and especially El Paso papers are giving considerable space. Supervisor Arthur will have to start constructing a fence around his part of the Sacramentos to keep out prospective park claim stakers.

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Under the auspices of its commercial club the ancient town of Taos is to celebrate the Fourth of July in whirlwind American and especially Western style. To judge by the announcement of events on the colored hand bills being sent out, the Las Vegas Cowboy Reunion, the Prescott and Flagstaff Frontier Days and such minor events will have stiff competition. Supervisor Loveridge is president of the recently reorganized commercial club.

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To District 3 falls first honor in the Grazing Assistant examination held in April. The Washington office advises today that Hugh O. Cassidy of the reconnaissance party heads the list of eligibles.

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In the June number of the Wool Grower, is published an article by Mr. Shepard on "Game Refuges and the Livestock Industry." Forest officers will find this well worth reading - it states in a nutshell the principle which should govern the relation of game to livestock.

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At the suggestion of Mr. Pooler, a District Office committee is studying ways and means for offering District 3 men an elementary course in technical forestry. The profit to be derived from such a move is obvious, and the committee takes it for granted that many men of all grades would be interested. But the rub comes in figuring just how to effect the necessary personal contacts to put the idea across. The committee has discarded the usual straight "correspondence school" method, believing that the proper method of instruction should not rely on correspondence but rather on the technical men now scattered throughout the force. The committee invites suggestions from any and all field men as to what they think of the idea and how it can be worked.

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Engineer Hughes has just completed the Buckman-Frijoles road running through the Bandelier National Monument on the Santa Fe. This road, about 10 miles in length, makes accessible to tourists the cliff dwellings and ruins in Frijoles Canyon, and Painted Cave ruins, and the Otowi-Tsankawi cliff dwellings. The project cost the Forest Service $7500 and cooperation amounted to $500.

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A general town picnic for citizens of Albuquerque is planned for July 5 to be held in Tejano Canyon on the Manzano about 25 miles from the city. The Forest Service has contributed to the affair by constructing toilet facilities, publishing a road log, and posting the road with good direction signs. Camp sanitation and fire prevention signs have also been posted in the two forks of the canyon constituting the picnic grounds.

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The Boston Evening Transcript, one of the most eminently respectable newspapers in the world, recently devoted about four columns to an article explaining the program of the New Mexico Game Protective Association on Federal Game Refuges, state game commissions with regulatory powers, and quantitive regulation of kill, as set forth in the last number of the Pine Cone. The Portland Oregonian, the most influential newspaper in the Northwest, also recently had an editorial on the same subject.

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According to notice just received the United States District Court of Arizona has issued a writ of habeas corpus directed to the Sheriff of Coconino County freeing former Forest Supervisor Ira T. Yarnall of the charge of violating the state laws of Arizona in closing the gaps in the right of way fences along the Santa Fe Railroad through the Tusayan National Forest. This decision fully sustains the right of the United States to establish a drift fence along the railroad right of way by closing the gaps that were left open to allow stock to pass back and forth.

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A sale of 10,000 cords of green and dead oak has just been made in the Chiricahua division of the Coronado. According to Forest Examiner Wilson, the annual growth of cordwood in the oak type is worth four times as much per acre as the revenue derived from grazing.

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"Lookout Ladies! The Santa Fe has one. Being unable to secure dependable and satisfactory masculine material, Mrs. Ranger Harbison has undertaken the task of looking the world over from 8 A. M. to 6 P. M., from Barrillas Peak as the weather conditions require. The first day up she was rained out."

- Santa Fe News Bulletin.

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E. A. Goldman of the Biological Survey arrived in Albuquerque June 30 and left the same day with Grazing Examiner Talbot for the Sitgreaves to spend the following two weeks on the study of the elk situation on the western part of that Forest. Mr. Goldman expects during this trip to complete the work started last winter when with Mr. Shepard he made a trip into this same region and determined the winter range of the elk. After the summer range is ascertained a report and recommendation covering a proposed refuge will be made to the Arizona State Game Warden with the expectation of action by the coming session of the legislature toward establishing the refuge.

District 4 - Intermountain District

At the meeting of the 71 Livestock Association held June 1, it was found that the total number of cattle lost from larkspur poisoning last year on the Three Creek Division of the Humboldt amounted to 250 head, valued at $60 per head or a loss of $15,000 to the permittees. It was proposed at the meeting that digging first be tried out and where the work could not be accomplished successfully by digging it was proposed to fence the areas in the district into larkspur pastures which could be used late in the fall for beef cattle.

The County line between Millard and Sevier Counties runs along the divide between Sevier and Pahvant Valleys. It seems that there is no information available to the County to indicate where this line runs with reference to the surveys. In the cases of ~~both~~ land lying near the dividing line, both Counties assess the same tracts. This often results in disagreements between the two Counties. Mr. Sterling K. Heppler called at the office recently to obtain information which would indicate in which County the Stillman Estate land lies. Fortunately, our survey of the Chalk Creek Drift Fence gave us the necessary data and information was furnished Mr. Heppler proving conclusively that the land lies in Sevier County. -- Fillmore Forest.

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An agreement has just been entered into with the City, County and Fort Douglas authorities to distribute the responsibility for foothill fires in the vicinity of Salt Lake. This leaves the Forest Service responsible only for the area including Big Cottonwood Canyon and south. -----Wasatch Forest.

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Applicant: "And if I take the job
I'm to get a raise in
salary every year?"
Employer: "Yes, provided your work
is satisfactory."
Applicant: "Ah! I thought there was
a catch somewhere."

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Because of experience recently acquired, the Supervisor of the Kaibab contemplates taking up surgery, particularly the painless amputation of toes. The other night about dark he decided to cut up a little wood while it was cool. One stick was successfully cut but on the start of the second the axe caught in a wire with the result that it very neatly amputated the middle toe of the left foot. It surely was unfortunate for such an accident to happen at the close of the fiscal year when a lot of work is to be done, for while the operation was successful and painless, an effort to walk demonstrated that the stitches will not stand such procedure; it will be necessary for him to stick around the house and attempt some work on material brought from the office.

Every story has a moral and while this shows that Mrs. Roak does not cut the wood, it plainly shows that Mr. Roak can't, so that in the future she will be allowed to wield the axe, as nobody ever heard of a woman chopping her foot.

Also it is an ill wind that blows nobody good and in this case the foot was somewhat mashed years ago and since then some trouble was experienced with this toe which trouble is now about ended. ----Kaibab Forest.

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The lowest cost of wintering Jackson's Hole cattle outside the valley that we have heard of was about $31 per head. The average is probably better than $40. ----Teton Forest.

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Clerk Forbes was sent to Ogden recently by the Cedar Post of the American Legion as a delegate to the State Convention of the Legion. In the reorganization of the State organization he was elected First Vice Commander for the ensuing year. ----Dixie-Sevier Forest.

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District 4 - Intermountain Section

What does it cost to operate a Ford car in District 4? The District Forester just completed a trip of 1,146 miles with a Service jitney, extending from Ogden to the Grand Canyon and back and involving passage over probably some of the steepest or roughest main roads in the District. The lowest price for gas was 32½¢, and the highest 60¢. His total expenditures to operate the car, including $5.00 for putting in new transmission bands, was $36.38. In addition, he borrowed 15 gallons of gas from Supervisor Roak, which at the 60¢ rate prevailing in Kanab, would have amounted to $9.00. However, it only cost the Government 36¢ plus transportation on a Government truck. At the prevailing rate, the total cost of operation was $45.38, or 4¢ per mile. The mileage rate of 7¢ would have left a net return of $34.84 to apply upon depreciation, taxes, interest and other charges.

Moral! Restrain your extravagant taste, use a Ford, and the 7¢ mileage rate will not hurt you.

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It is likely that the cattle on the Merritt Creek cattle allotment have been well herded from the sheep allotments this year since it is our understanding that the Merritt Creek Association have a very competent lady rider and it is, therefore, surmised that there are various bachelor range riders ready to lend a helping hand at any time the work becomes too heavy for the center of attraction. ----Humboldt Forest.

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Supervisor Winn has induced the Silver City Independent to run the following fire warning, conspicuously "boxed":

"The annual forest fire season is again approaching. The attention of all users of the Gila National Forest is respectfully called to the supreme necessity of care with fires. With the cooperation and assistance of the users of the forest, this annual danger to national timber, forage and watershed resources can be reduced to a minimum. In its endeavors to protect these resources, the Forest Service will appreciate the help of all those who have occasion to use the National Forest."

District 6 - North Pacific District

From three of the District 6 Forests,- Oregon, Rainier, and Olympic,- come reports of cooperation already given and more to be available in the near future in recreational development, amounting in all to about $7,000.

Multnomah County, Oregon, has expended about $1,000 in the promotion of recreational facilities on National Forest lands. The county has also decided to purchase 19 acres for an addition to the Eagle Creek Camp Grounds at a cost of $3,000.

The commissioners of Gray's Harbor County, Washington, have offered to cooperate in the improvement of the Willaby and Falls Creek Camp Grounds, on Quinaul Lake, on the Olympic Forest. Five hundred dollars has been definitely promised and an increase of this amount is contemplated.

The Quilcene community on the Olympic has contributed considerable labor in the improvement of Rainbow Camp.

The Mountaineers Club expended approximately $600 on a section of trail about two miles in length connecting the Upper Elwha with the Low Divide and a similar amount in assisting the Forest Service in trail construction along the upper North Fork of the Quinault River, Olympic Forest. These expenditures were purely in the interest of their recreational outing in 1913.

The Klahhane Club, of Port Angeles, Washington, has made some expenditure for improvements in the Mount Angeles region on the Olympic Forest. This club has offered to cooperate in the construction of about four miles of permanent trail of high recreational value. Their share is estimated at $600. The same organization has offered to assist the Forest Service in the introduction of mountain goats to the Mount Angeles region. The total cost of this project is expected to be about $400, of which the Club is willing to pay fully one half.

Light snowfall on the Kenai Peninsula, Alaska, where they were to be captured, prevented an attempt to introduce moose on the western side of the Olympic Forest this year. Of the expense, $500 was to be contributed by the U. S. Biological Survey, $500 by the State Game Commission, and the balance, some $1,500, was to have been made up by the Moose Lodge with possibly some assistance from sportsmen.

The Commercial Club at Yakima, Washington, has promised $500 for immediate expenditure on the improvement of Cave Creek Camp Grounds on the Naches River, 43 miles from Yakima, Rainier National Forest, and more is to come!

Slowly but surely lumber companies are beginning to follow the methods of cutting the Forest Service insists upon to safeguard the scenic beauty of cutting areas. The Hammond Lumber Company has made a start on the Oregon beach at and near Tillamook Head. Other examples are in the Gray's Harbor region on the Washington coast, where lumbermen are beginning to be interested in preserving the beauties of drives along this harbor; along the "inland route" to Astoria, where some of the timber is being cut by the selective method; and on the Oregon coast between Astoria and Saddle Mountain, on the right of way of the Lewis and Clark railway.

C. E. Arneson, of Mabton, Washington, has just paid $3,000 for letting a fire get started on the Okanogan Forest three years ago. Arneson was herding sheep near where the fire started. Evidence indicated that he had set the fire and let it escape through criminal carelessness. He put up a fight in the federal court at Spokane but finally decided to pay the $3,000 as a fine.

On the Okanogan Forest, during the same week a homesteader paid a $10 fine for burning brush without a permit.

A careless camper who, last summer, allowed his fire to spread on the Rainier has just paid a $50 fine for the offense in the federal court at Tacoma.

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Four carrier pigeons brought from the Forest Service lofts at Bend were let loose from the District Forester's office in Portland on June 30 at 10:45 a. m., for a test flight. They rose and struck east over the Cascades to Bend, arriving there at 1:50 p. m., covering the distance of some 140 miles between Portland and Bend in three hours and five minutes. These pigeons were trained by Forest Examiner W. J. Sproat, of the Deschutes Forest.

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On June 28, authority was granted to Supervisor Allen to require campfire permits covering the camping grounds on the Naches and Tieton watersheds on the Rainier. These areas are much used by campers and the fire menace was considered sufficiently hazardous on them to justify Supervisor Allen in requesting authority to require permits for the months of July and August. The permits will be issued with a minimum of inconvenience to the public.

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The Oregon airplane forest patrol started on July 1. The citizens of Roseburg, at a recent election, authorized the town council to secure a landing field, and Supervisor Ramsdell, of the Umpqua, has offered to lay out and mark the field as soon as a site has been selected. An emergency landing field of several hundred acres has been selected near Crane Prairie, on the Deschutes, and another will be selected near Mount Jefferson.

The first trip of the 1920 forest airplane patrol from Eugene to Portland resulted in the sighting of two small fires in the Cascade Mountains.

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District Forecaster E. A. Beals, of the Weather Bureau, San Francisco office, is cooperating again this season by having fire slogans printed on his daily weather maps, forecast cards, crop reports, etc. This cooperation covers the states of Oregon, Washington, and California. At his request, this office recently sent him a set of slogans to be used this season.

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

July 19, 1920.

The Editor's Lament

The difficulty of getting stencil-cutters for the salaries we have to offer has made the publication of the Bulletin no easy matter for several months. Last week, however, for the first time it proved impossible to do the work in the Forest Service and we had to ask for outside help. After considerable scouting around, assistance was secured at the Solicitor's office and the Bulletin finally went to press.

This week the Chief Clerk's office has offered to help us out. The Editor takes this means of thanking the two offices for their timely aid.

It is hoped that some permanent arrangement can soon be made and that the Bulletin can be issued regularly, but if your copy doesn't come when it should, draw a mental picture of the Editor trying frantically to run down rumors that the Office of So-and-So has a dandy stencil-cutter who has lots of spare time, and realize that the shortage of money and help is not all in the field.

Administrative Studies Again

In a recent issue of the Bulletin I asked whether administrative men thought enough of their occupation to be interested in some systematic efforts to get away from the rule of thumb methods and to develop a body of knowledge which will gain for the profession of administration the recognition that its importance warrants.

We all know that in our organization the men who were trained to be engineers or foresters usually work but little at the things for which they were trained. Why? Because they are required for administrative work. But why are they put on work for which they have no training? The main reason is that the schools seldom know how or care to teach administration, consequently a large share of the technically trained men are forced to get their knowledge of their real life work not in the years that are devoted to training, but after they get on the job when they necessarily learn at the expense of fellow workers and the job they are experimenting with.

But the schools are not to be blamed for their neglect. They can not be expected to lead in the development of professional administration. They can not be expected to make a place for administration in their curricula if administrators themselves think that they learn administration like they learn how to sing "how dry I am."

In this issue Mr. Morrell suggests some studies which seem to him to be worth while.

- Roy Headley.

The following specific jobs are things which it seems to me might be delegated out to the field men as a starter. Perhaps an invitation for general suggestions will bring out more.

1. A comparison of administration on different sized units. This would be a continuation of the subject which Keplinger and I went into last season, and it seems to me it offers a very fertile field. Our method, as you know, was to compare the amounts of work on different units, the manner in which the men in charge spent their time, and the relative costs. We did not get much into relative efficiency.

I would suggest that each District be asked to make a study of this kind on at least ten representative ranger districts and two representative Forests, classifying the time of the rangers separately for winter and summer seasons, into field supervision, office work, and labor; first listing the amounts of work on each district, including the following important lines: acreage; number of fires of each class; degree of hazard; timber cut, number of sales; number of free use permits issued; number of special use permits issued; number in effect; cattle and horses grazed, number of permits; sheep and goats grazed, number of permits; number of claims cases reported; number of visitors to the area; number of buildings maintained; number miles of trail maintained; number miles of fences maintained; number miles of telephone lines maintained; other important work.

2. I would suggest a similar study for two representative Forests in each District, making a part of the study an analysis of how the Supervisor spends his time. I would suggest the following tentative divisions of time:

Office work:

Time spent on: Conferences -
- (a) with Forest users.
- (b) with Service employes.

Office routine -
- (a) work requiring Supervisor's attention.
- (b) work which might be done by others.

Scientific and technical work -
- (a) work requiring Supervisor's attention.
- (b) work which might be done by others.

(A similar study should be made on the time of the Deputy, Forest Assistant, or other assistant to the Supervisor.)

Field work

Time spent: in field -
- (a) on supervision of work of rangers or others.
- (b) giving assistance to rangers or others on projects, or field work in general, of a kind which requires the training and ability of a Supervisor or other administrative officer for whom the study is being made.
- (c) assisting field men or doing field work which could be done satisfactorily by an officer of lower rank.
- (d) attending meetings, conferences, etc., with Forest users and others, away from Supervisor's office.

This would constitute about all of this study. It would be independent of ranger districts, since the problem we want to solve is the difference in how the overhead spends its time on representative areas in different Districts and of different sizes.

3. Define qualifications which the Service expects in the way of training, experience, education, personality, etc., for the different executive field positions, that is, Supervisors, Deputies, Rangers, Lumbermen, Scalers, etc. Probably have two men in each District make up definitions which they think would satisfactorily list these qualifications, and with the material submitted attempt to fix some fairly comprehensive definitions of what we are after.

4. Request two Supervisors in each District to define proper methods for training rangers; give definitions of methods which have been used; time which has been consumed in training men; the nature of help that has been necessary; illustrations of errors or failures in the work due to inexperience of new men; how much time has training taken in the past; what is the expense for training the average new man, counting the lost time due to inefficiency from not knowing the work, salary and expanses of the supervisory officer in assistance, etc.; draw up plans by which methods of training men could be improved, both as to cutting down the time and expense.

5. Standards of work. Establish for each type of timber in each District what is a fair day's work in marking timber, that is, number of trees and feet b. m.; what is a fair day's scaling; what is a fair day's brush burning. Such a project ought to be assigned to two or more rangers in charge of sales in each type and supervised by a Supervisor, Deputy or Forest Examiner, in order that speed is not made the objective rather than the right kind of marking or scaling.

Establish a standard for range administration, defining what amount and kind of work is necessary under typical conditions, and the cost in time and money for supervising the grazing of cattle and horses, and sheep and goats, per thousand head.

Establish, by assignment to several men in each District, the comparative cost of maintaining tree telephone lines vs. pole lines. Careful analyses of old diaries on several representative districts might bring out the answer to this fairly satisfactorily. A few men in each District could then also be requested to keep careful record of their time on representative lines.

Make a similar study for maintenance of trails.

Cost data of this kind would probably be more useful than the average cost data which can be obtained by a cost keeping system. Average data only gives us the cost of present methods, while an assignment of special men to projects would be more likely to bring out the weaknesses of the system.

6. Standardization of office practice. Have two good Forest Clerks in each District consider carefully and put down in definite written form the best ways of doing the routine work in the Supervisor's office. Have several rangers, say half a dozen in each District, make a similar record.

It seems to me hardly worth while to attempt to outline with greater definiteness just how this sort of work is to be undertaken at the present time. Good judgment and faithful work and conservatism in statements of conclusion are the essential things to be sought for. Doubtless a considerable amount of the data secured will not be definite enough upon which to base conclusions, but even so, the work will have been of value to the men who undertake it. At the end of the season, with the data secured perhaps a better line up of investigation and more definite methods can be had.

-Fred Morrell.

Every Little Bit Helps

A decision has been made that in the future barn or corral facilities will be provided at Government expense wherever employees are required to keep horses for use in official work and there are no Government-owned facilities. This will apply to all classes of employees, and will afford welcome relief to many men stationed in towns where barn rent has had to be added to all the other thousand and one expenses.

Big Doings at Madison

By the time this copy of the Bulletin reaches its readers the Decennial Celebration of the Forest Products Laboratory will be history and everybody who had the good fortune to attend will be telling about what a good time they had. Certainly the schedule of events promises that the affair will be quite an event. Here is what the program offers:

10:30 A.M. GENERAL ASSEMBLEY
Agricultural Hall, University of Wisconsin
H. F. Weiss, Chairman
Consulting Engineer, C. F. Burgess Laboratories and Former Director, Forest Products Laboratory.
"Legislative Measures for Forest Conservation"
The Honorable Emanuel L. Phillip, Governor of Wisconsin.
"Translating Knowledge into Power"
E. A. Birge, L.L.D.,S.C.D., President of the University of Wisconsin.
"The Forest Products Laboratory"
C. P. Winslow, Director, Forest Products Laboratory.

12:00 noon LUNCHEON
Gymnasium, University of Wisconsin
All visitors will be guests of the Decennial Committee at this luncheon.

1:00 P.M. Inspection of the Forest Products Laboratory
(Report at the main building of the Laboratory on University Avenue and join a party with a guide)
The Home Economics Department of the University of Wisconsin will hold a special demonstration for the benefit of visiting ladies.

4:00 P.M. RECREATION
Automobile tour of the city, boating and swimming.
Please advise guides as to your preference and arrangements will be made accordingly.

7:00 P.M. BANQUET
Gymnasium, University of Wisconsin
All visitors will be guests of the Decennial Committee at this banquet.
Burr W. Jones, L.L.D., Toastmaster
"What Research Has Accomplished For The Automotive Industry"
C. F. Kettering, Chief Engineer, General Motors Company
"Forests and National Prosperity"
Lieutenant-Colonel W. B. Greeley, Forester, Forest Service, United States Department of Agriculture.

FRIDAY, JULY 23, 1920

10:00 A.M. GENERAL ASSEMBLY.
Agricultural Hall, University of Wisconsin
John Foley, Chairman. Forester, Pennsylvania Railway System.
"Some Problems of the Pulp and Paper Industry"
D. C. Everest, Secretary and General Manager, Marathon Paper Mills Company.
"America's Place in Industrial Research"
H. E. Howe, Chairman, Research Extension Division, National Research Council.
"Some Problems of the Lumber Industry"
M. J. Scanlon, Member of the Forestry Committee, National Lumber Manufacturers' Association.

12:00 noon LUNCHEON
Gymnasium, University of Wisconsin
All visitors will be guests of the Decennial Committee at this luncheon

ADJOURNMENT

The celebration was "planned and financed by friends of the Laboratory as a mark of the appreciation of the distinguished ten year record of service to American industry of that organization." The celebration promises to be the occasion for important conferences regarding various phases of the National Forest policy and Col. Greeley's address is expected to be a regular "keynote speech." Unquestionably much good will come of the celebration. That the Laboratory has made many friends for itself is attested by the way in which they are celebrating its birthday.

The Bulletin extends its congratulations to the Laboratory and hopes that it will have many happy returns of the day.

Down With The Bosses !!!??

Can it be possible that the "Branch of Operation" is reading "The Bugle of Freedom" so assiduously that it (or they) has come to believe with some famous statesman in Europe that all bosses are iniquitous per se, and that always "the peepul should rule." This seems to be the drift of things in the article in the Bulletin of June 21.

In Bulletin of May 10, a prominent member of said Branch of Operation made some statements, which we hope he may never have to eat, regarding the efficiency of some District organizations. Since the statement was so made and District 2 admits it to be true, we will not ask for space to prove it here.

Then came a voice from the wilderness crying that one Benedict would like to know how much company from San Francisco, Washington, and other places of large assemblage, he is going to have if he lightens the "overhead" by going to the mat with one of those $6000 jobs that are always bantering Forest Officers in California.

And now the "Branch" comes back at him and says he's got a beam in his "overhead" and that before he points the finger of suspicion at Washington, San Francisco, or Missoula, maybe he should go out and hire another half of a ranger so he will have one to boss each day of the week instead of only six and a half, which enables him to finish off the last man at noon Saturday and knock off for the day.

We wouldn't take sides in this controversy except for the fact that "The Branch" whistled us up close by that article of May 10 and now gives us a swift, left-handed kick by saying, through these words, to Benedict and a cleverly devised chart by which the width of a man is shown all out of proportion to his height, that we have "beams in our overhead" in the form of too many bosses.

Benedict is asked to answer the question - "How many rangers should a Supervisor boss?" While he is stuttering, we hasten to butt in with the suggestion that that depends ----- primarily on the multiplicity of lines of work, or interests, or problems, that those rangers have to handle. If about the only business on the Forest is grazing, and rangers and Supervisor have to know about one subject only, there is no reason why a Supervisor can't boss a lot of rangers. He and they have only one thing to learn and the work isn't complicated. The same thing is true if it is only a protection proposition. One man can easily supervise the work of a dozen others all laying brick in a wall, but if, instead, one is excavating, one laying brick, one building window frames, another glazing, one painting, one putting in a heating plant, another plumbing, etc., and the boss man has to know how to do all these things and to show the other fellows how, he may holler for a smaller gang, and we believe that is why the Supervisor in D-2 has fewer men under him.

We believe that the variety of work on the average D-2 Forest is Greater than in any other District. We submit that when a Supervisor has to oversee the work of a bunch of gentlemen whose daily activities range from cutting logs out of trails, through the whole gamut of estimating, marking, scaling, etc., on sales of timber that grow on rocky mountain sides from which cities get their water supply; handling of sheep, cattle, goats, horses and swine on over-desired ranges; discovering and fighting fires; arranging for special use permits for everything from a hay-cutting permit to an amphitheatre in which the Catholics of the world are to worship under the shadow of Holy Cross Mountain; reporting on claims from which optimistic locators expect to extract minerals of all kinds from coal to radium; seeing that some millions of tourists find proper accommodations for tanning their skins and blistering their feet without setting fire to the universe, etc., etc., etc.; when, we say, a Supervisor must oversee the work of rangers who dip into all of these things and train them so as to dip properly and not rock the boat too much, he doesn't need so many of them to keep him busy as would be the case if there were fewer activities involved. Neither do we believe that the supervision necessary over a four months guard whose job is to sit in a high place and wait for something to happen when multiplied by three is equal to that necessary to oversee the work of a new yearlong ranger who has this multiplicity of detail.

Now, if a District or Forest has met a situation of this kind and gotten away with it efficiently and economically, we should be careful in comparing its organization with one that has an entirely different situation to meet, and in drawing any hasty conclusions to the effect that it is "boss-ridden," we should always be careful too in applying the epithet "boss." The Branch of Operation has very neatly diverted the argument "away from home" by an Irish answer to Benedict's question and by wholesale inclusion of all members of Forest organizations who don't beat typewriters or live in a ranger station in that class of employes which is under suspicion. Some Forest Assistants and Forest Examiners in this District who, through their efforts to hurry up the job of estimating or marking timber or surveying special uses, etc., etc., under one ranger in time to get over to another district and help the next man, have come to believe with Benjamin Franklin, or whoever it was that said it, that "Life is just one darn thing after another," and they want to know who it is that they are supposed to boss.

- Fred Morrell - In Behalf of D-2.

Taking the Beam out of the Overhead

Official Washington is an adept at passing the buck!

For the information of Operation the Sierra has the following organization:

1 Supervisor.
5 District Rangers.
3 Rangers on special work - Timber, Grazing, Improvement.
3 Assistant Rangers.
3 Scalers - 7 months.
14 Guards and lookouts - average 4 months.
3 Telephone operators, yearlong
1 Telephone operator - 5 months.
13 Temporary men on improvement.
4 Temporary men on Insect Control
2 Clerks.

This organization, I believe, is typical of District 5, for we are committed to the staff idea which has for one of its principal objects the reduction of overhead along with increased efficiency.

The line-up gives one so-called boss to 23 men, not including improvement and insect control crews. As a matter of fact, the Supervisor does not function entirely as overhead for he performs some of the actual work.

I believe we need to define overhead. - My definition is: "That part of the organization that directs the work of others but only indirectly contributes to its actual performance." A specialist either in the D. O. or on the Forest is not overhead though he may at times direct the actions of others, but his main duty is the actual performance of work in his special line. Frankly I don't know where to draw the line on the Forest, but I do know that there must be at least one man in charge, and perhaps another to be in training for his job.

The specialist idea does not tend to develop general Forest executives though they will furnish material for executive positions with proper training.

Does this remove the beam from our overhead, and will Headly please start on the real operation or tell us why it isn't necessary?

- M. A. Benedict.

Overhead Again!

In answer to Mr. Benedict's question. "What are the Washington and District offices doing to help meet the shrinkage of appropriations?" Here is a table which shows what the Washington office is doing about it.

This table includes only true overhead except perhaps in a few places where the line between overhead and direct is not easily drawn.

Three years are shown: one before the war, the preceding year, and the current one. This gives a little prospectus to the picture. Note that for the years 1917, 1920, and 1921, the number of clerks, etc., has steadily decreased -- 165, 155, and 143 in 1921. The number of administratives has also decreased, the figures running 67, 65, and 59. Total salaries for 1921 is $9,000 less than in 1920, and total expenses is $7,000 less.

In a later issue District office overhead will be treated.

- Branch of Operation.

Bouquets and Brickbats

Extract from letter to Mr. Clapp from Bolling Arthur Johnson, of the Lumber World Review:

"I have your printed copy of Mr. Greeley's summary of 'The Report on Timber Depreciation', etc., and also the original document, and I must say I am utterly astounded at the expeditious printing of this Report. Nothing like it has before happened in my 35 years association with the lumber industry in the capacity of a lumber trade newspaper man. Strange statement, you may think. It is nevertheless a very true one. I am covering the matter editorially in the current, July 25, issue of the Lumber World Review."

Buying Improvements

Build now! Do not buy! That is the slogan the Forest Service must follow when it comes to getting office buildings for rangers and supervisors. No matter how advantageous it may be to the Government to purchase rather than to build, the existing provision in the appropriation bill is sufficiently restrictive to prevent purchases.

COMPARATIVE STATEMENT OF PERSONNEL AND EXPENDITURES FOR

FISCAL YEARS 1917, 1920, 1921

	Fiscal Year 1917				Fiscal Year 1920				Fiscal Year 1921			
	No. clerks etc.	No. adm. officers	Total salaries	Total expenses	No. clerks etc.	No. adm. officers	Total salaries	Total expenses	No. clerks etc.	No. adm. officers	Total salaries	Total expenses
Forester's Office*	16	6	$42,880	$6,300	13	6	$40,417	$5,500	13	4	$32,762	$4,500
Operation**	43	6	56,030	5,650	35	5	46,000	4,700	34	5	46,700	3,500
Public Relations	17	6	33,180	1,620	18	7	38,200	1,780	16	6	36,740	800
Lands	11	7	29,580	5,200	11	6	30,960	4,200	9	4	28,320	3,400
Research***	26	22	72,385	12,350	24	20	75,720	13,150	21	20	77,640	11,515
Forest Management	7	7	28,850	8,400	7	7	28,877	5,800	7	7	32,600	5,400
Grazing	2	6	14,400	6,200	3	5	15,600	5,600	3	4	16,800	4,200
Engineering	43	7	66,270	3,500	44	9	76,000	4,700	40	9	70,980	4,700
Total	165	67	343,575	49,220	155	65	351,774	45,430	143	59	342,542	38,015

*Includes Accounts and Solicitor's Office.
**Does not include Ogden Supply Depot or Property Auditor, Washington Supply Depot, Charwomen or Shops.
***Washington only.

Recently an opportunity to purchase improvements arose in District 3. A public-spirited citizen of Taos was willing to donate a city lot and sell the buildings on it at a price much below their real value. It looked like a good chance for the Forest Service to get headquarters in a place where it has been very difficult to find satisfactory space. The case was put up to the Comptroller for decision. He ruled that the appropriation for the Forest Service was not available for this purpose.

This is what the Comptroller had to say:

"Section 3678, Revised Statutes, provides:

> "All sums appropriated for the various branches of expenditure in the public service shall be applied solely to the objects for which they are respectively made, and for no others."
>
> "The act of July 24, 1919, 41 Stat., 247, making appropriation for the general expenses of the Forest Service provides:
>
> "* * * to erect necessary buildings: Provided That the cost of any building erected shall not exceed $800;***."
>
> "In a previous decision of this office, 18 Comp. Dec., 384, it was held, that an appropriation for the construction and repair of hospitals was not available for the purchase of buildings already erected.
>
> "Though it is undoubtedly true that the purchase of the buildings described in your letter would be advantageous, yet I am constrained to hold that the appropriation quoted is not available for such purchase!"

Needless to say a modification of the law to enable us to make purchases will be requested.

- Kelleter.

Fire Law Enforcement

Are men in the Service as a whole taking up law enforcement as actively as they should? It is feared a negative answer must be given. If I am correct, how are we going to succeed in getting more aggressive action? It is not a clear cut problem by any means; however, I have a suggestion to offer.

Most cases are shadowed in a mess of doubt. To the more experienced rangers doubt is no insurmountable obstacle. To the average Ranger or Supervisor however it represents a wall before which the majority falter or fail entirely. Are the experienced men passing on their skill and knowledge to the more backward brothers? Not as effectively as is desired. How is the educational work going to be extended without great cost and a great expenditure of time? Why not use the "Bulletin?"

Would it not be well to call upon the Districts to report to the Forester all intricate and difficult successful cases with a detailed account of the way the evidence was worked up? Not in a flippant manner as some which have recently been reported, but in a serious, step by step, educational style. If this were done many of the men who now falter would learn little tricks and methods which undoubtedly would place law enforcement on a much more matter of fact basis.

All the Rangers are interested but they feel unable to make a start. The recital of the working up of evidence in the Bulletin might tell just what to do or at least it would give a lead -- an idea of how to go ahead.

- Evan W.Kelley

(This idea appeals to the Editor, who has always been strong for reporting stories.

While there are certain objections to turning the Bulletin into a "regular detective" magazine - undoubtedly accounts of the kind suggested by Mr. Kelley will lend interest to the Bulletin and will be a help to those rangers who are not as yet skilled sleuths. Will some of the leaders in fire law work use the Bulletin to pass on helpful points in short accounts of actual cases they have handled? - Editor)

The Paint Brush

At the District Foresters meeting in Salt Lake last December the adoption of a Service-wide standard paint color scheme was recommended by popular vote. When Operation tried to carry out the mandates of the meeting, however it ran into all sorts of reservations. It now develops that only one District was in favor of the adoption of Service-wide standards without reservations. This District believes that the Forester should in effect adopt a scheme and say, "Here it is; use it; shut up." Two Districts had no particular ideas on the subject and refused to get excited. The remaining four Districts objected to the acceptance of the scheme as proposed and came back with counter proposals, suggesting variations to meet local conditions.

The objection to a standard scheme was raised that since local conditions vary, there is need for flexibility and that such flexibility was possible only under District supervision and highly impracticable from Washington. One of the modifications suggested was that a color scheme be adopted whereby the Forests, regardless of Districts, would be classified into type zones and a color in keeping with the natural surroundings of each zone be selected. In general it has been found that the adoption of any standard color scheme subject to the modification proposed would nullify the general plan. Four or five Districts seemed to be as much opposed to the adoption of a color scheme without reservations as were the "irreconcilables" of the Senate to the League of Nations.

One of the arguments advanced in favor of the scheme was that it would make possible the pooling of purchases of paint. Investigations show, however, that there is no appreciable saving in the purchase of paint in lots of less than 5,000 gallons. The estimated annual need for paint in the Service does not exceed 3,000 gallons and in order to purchase this amount under one contract, delivery at a central point would be necessary. The paint would then have to be distributed in lots of about 500 gallons each to the Districts. The extra freight, worry, and chance for error that this procedure would involve is not thought to be worth the slight saving which would be possible, and each District will consequently be left free to choose its own paint.

Washington Notes

Mr. Sherman left Sunday for Asheville, N. C., where he will address the meeting of the Southern Newspaper Publishers Association.

E. E. Carter has been in New England for the past week or ten days.

J. G. Peters is in the Lake States on an inspection trip in connection with Weeks Law fire protection work.

S. T. Dana is at the Laboratory for the Decennial celebration. He will also classify the employes there in accordance with the scheme proposed by the Reclassification Commission.

On July 13 at 4 p. m. a wire was received from District 3 stating that a serious fire situation necessitated buying a motor truck, and requesting authority to make the purchase. A letter asking the Secretary's permission was prepared, but on account of Mr. Sherman's absence from the building was not signed until the following morning. The letter was sent across by messenger, and by 9:50, July 14, the desired authority had been granted. A few minutes later a wire was on the way to District 3, and because of the difference in time should have reached Albuquerque before the office opened.

Forest Products Laboratory Notes

The laboratory has had several distinguished visitors recently

Mr. Dohrenfeldt of Norway, has been here getting plans and blueprints for a working basis for a similar laboratory to be established in Norway.

Jhr. Ir. G. J. Laman Trip from the Hague (Holland), who is a civil engineer interested in lumber and sawmills, has been here investigating the utilization of sawmill waste. He is particularly interested in the investment of Dutch capitol in sawmills and lumber in this country.

James A. Gorrie of New Zealand was here investigating the construction of water spray kilns with the idea of introducing them in his country for drying native beech and other woods.

LaMan Ritchie of the Electric Chemical Section of the U. S. Bureau of Standards recently was here getting a general idea of the work done.

The first installment of the Riehle testing machine has arrived. This machine is to be used over in the Section of Timber Tests for testing columns and has a capacity of 1,000,000 pounds.

"British airships have flown more than 90,000 hours, the equivalent of a period of ten years," as reported by the N. Y. Evening Post 6-12-20. "They have totalled 2,245,000 miles equal to ninety circuits of the earth. Fatalities have numbered only forty-eight, including deaths in training and in action against the enemy. This averages one death for every 46,787 miles." It is stated that the R-34 is capable of cruising 7,700 miles at reduced speed. (Air Service Bulletin)

Word comes from England that the Cambridgeshire Forestry Association school of forestry believes there is no reason why trees can not be made to grow square instead of round, thus producing lumber from which slabs will not have to be sawed. When they get so they can control the shape of trees to this extent why not go further. If they can be made to grow square, why not make them grow inch boards. There is not need to stop there either. Why not grow mouldings, casings, and base, and a variety of other forms?

Warren D. Brush, of the Washington Office of Products, was at the laboratory for two days this week. Mr. Brush will visit a number of the wood-using industries in Wisconsin in order to obtain further information on the uses of basswood.

L. L. Brown, of the British Columbia Forestry Branch was a recent guest of the laboratory. Mr. Brown is interested in the general work of the laboratory and especially that of Timber Mechanics.

G. M. Christophel, representing the A. Geo Schulz Company of Milwaukee, was a visitor at the laboratory, this week. Mr. Christophel is interested in fibre shipping containers, so visited both the box laboratory and the section of pulp and paper.

A number of interesting phases of the kiln drying situation were brought out at the smoker, which was held this week at the University Club by the Section of Timber Physics, for the men in the kiln drying course. Rolf Thelen started the ball rolling by telling of some of the kiln drying problems that the laboratory was called on to solve during the war. After a short talk in which Albert Herman described the kiln drying of gunstock and vehicle stock at the Rock Island Arsenal, a lively exchange of varied experiences and points of view brought out very clearly that kiln drying is one of the key operations in a hardwood manufacturing plant and improvements and refinements in kiln drying practice can not help but increase profits and add to the satisfaction which hardwood products will produce in service.

District 2 - Rocky Mountain District

The Marking Board consisting of Forest Inspector C. G. Smith of the Washington Office, Messrs. Granger, Thompson, and Donery of the District Office, Supervisor Hoffman, Forest Examiner Easterbrooks and Ranger Thomas, of the Montezuma spent several days recently in the Doleres unit on the Montezuma Forest marking a number of sample strips preparatory to offering that timber for sale.

The timber on this unit aggregates about 300,000,000 feet of western yellow pine and is much more over-mature than any other stand in Colorado. In some places, reproduction is abundant, in most places there is a fair stand of it and in a few localities it is almost entirely lacking. Owing to the extreme over-maturity of the timber it was decided to mark virtually all yellow pine wherever there is at hand a satisfactory stand of young growth two feet or over in height. Since the fire danger in this region is very small, it is felt that this policy is a safe one.

On the main sample strip of 15 acres, there was a total stand of 10,000 board feet per acre in trees 12 inches diameter breast-height and over of which 88% was marked for cutting, giving a cut of 8800 board feet per acre.

Lumberman Donery is now engaged in making an appraisal of this chance. Supervisor Hoffman believes that it will bring as much as $5.00.

Little Elmer Fowler, 6 year old son of Mr. and Mrs. Frank Fowler, living at Hillside, Colorado, a few miles from Westcliffe on the San Isabel Forest, wandered from his home on Sunday afternoon and for four days was lost in the hills. A searching party of 200 men, under the direction of Forest Supervisor A. C. Hamel, combed the country looking for him. He was found on Thursday afternoon at a point near timberline and five miles from his home. To his rescuers he said: "My name's Fowler, if you'll take me to Stacy's ranch, I'll walk the rest of the way home." He seemed none the worse for his experience, though how he subsisted and kept from freezing those cold nights is a mystery.

District 3 - Southwestern District

"The Taos District boasts of being the only District on the Carson and probably in District 3 that has a ball team, every member being employed by the Forest Service--Ranger Barker is manager. The team is composed of Pueblo Indians working on the P.C. R.R. Trail. They challenge all comers."

- Carson Forest.

"A Mexican, Pete Leon, found a fire going good from lightning that was never seen or reported by lookouts. He took to it alone and after four hours hard work put it out, then reported it to me. It makes a fellow feel as if his work is worth while, after all, to get this kind of cooperation.

- Warnock - Gila

Another wild take of the ferocious beasties found in D-3:

Contribution from Ranger Wingo, "A full sized family of Skunks moved to the station today and were discovered as they were taking up quarters under the floor. One of the small ones was shot, being rather slow getting under cover; later mother skunk endeavored to rescue the dead one and was also shot.

- Lincoln.

The Apache Forest figures as the background of two recent novels,- one, "The Forest Man," by Zane Grey, and the other, "In the Great Apache Forest," by James W. Shultz, of Greer, Arizona. The latter is a book for boys. Hannah Crosby, Lookout on the Apache a couple of years ago, figures as heroine under her real name, and with her brother takes part in adventures with fierce grizzlies, incendiary I.W.W.'s, who cause the Forest Service much grief, and with Indians.

Ranger Scholefield finds, after pretty careful feeding for a year that 4,000 lbs. of grain, mostly rolled barley, is sufficient for feeding 3 horses for a year, one of the horses being used only part of the time. He also finds that 4,000 lbs. of alfalfa will do the same work at a station with a fairly good pasture and that with the aid of a night pasture, he can make a considerable reduction in the amount of hay used."

- Coronado.

A brand new Forest Service position is indicated in a Civil Service announcement of an examination for "Constructor of Educational Material." The qualifications required are about as multitudinous and varied as the well known list recently mentioned as needed to carry through the Ranger job. Among the duties are motion picture photographer; still life photographer - outdoor, game, plants, forest activities; taxidermist; modeler; and designer and builder of exhibits illustrating any forest activity.

" 'Necessity is the mother of Invention.' Ranger E. L. Perry made a reel for rolling up telephone wire by taking a 4" cut off a 20" log, removed the bark, cut two 40" saplings, flattened on the side and nailed them at right angles to each other on one side of the drum, thus providing spokes by means of which it was revolved. Short pieces of lumber tacked to the other side prevented the wire from slipping off the reel. A handle was then run through the center. It can be set up between two trees and a half mile can be reeled, making a uniform roll."

- Carson.

Albuquerque people were introduced under most auspicious circumstances to the recreation possibilities of the Tejano and Sulphur Canyons in the Manzanos on July 5 when about 250 cars and 800 city dwellers journeyed to the hills for a community picnic. While Albuquerque sweltered under a temperature of well over 90, cool breezes and the shade of the firs, on the picnic grounds were being enjoyed by the picnickers. A real band, races, games, contests, and family group picnics gave to the affair all the earmarks of a good old fashioned picnic. Forest officers were present to suppress fire works, direct autos, advise the careless fire builder and generally act as hosts of the party. The big boy scout camp held for two weeks on the area broke up on this afternoon.

Telephone engineer Slonaker arrived in the office recently with a bit of interesting evidence collected from several of the phone lines in the vicinity of Williams. This evidence consisted of sections of Forest Service line wire which had been cut by some criminally inclined individual. Two lines were cut and a repeating coil destroyed within a stretch of 10 miles apparently by the same party. An implement more powerful than an 8" Klein pliers was used on the wire. Due to the work of this individual one lookout was out of communication for five days during the midst of the fire season.

District 4 - Intermountain District

In an effort to secure "some fire slogans with a punch" this district has inaugurated a fire slogan and prize contest, with the following prizes:

1. For the best slogan received on or before August 31, the Forest from which it is submitted will be allotted $50 from the G. E. contingent.
2. For the second best slogan the Forest will be allotted the sum of $25.
3. The third best slogan will receive Honorable Mention.

"If the prize winning slogan, under number 1 or number 2 is submitted by a District Ranger or any member of his immediate family, the money prize will be reallotted by the Supervisor to that Ranger for official expenditure which will improve the living or working conditions at the Station which he or he and his family occupy.

If the prize winning slogan is submitted by a short term man, a Supervisor, Deputy, Clerk or technical assistant, the allotment will be similarly handled, being expended for an official purpose which will better the working conditions of the winning officer.

SUPERVISORS WILL BE RESPONSIBLE FOR SEEING THAT IN THE EXPENDITURE OF THESE ALLOTMENTS FISCAL AND ADMINISTRATIVE REGULATIONS ARE STRICTLY COMPLIED WITH AND THAT THE ALLOTMENTS ARE DEVOTED TO REALLY URGENT NEEDS.

5. NO SLOGAN EXCEEDING EIGHT WORDS IN LENGTH will be acceptable."

Contestants may submit as many different slogans as they please. THE MORE THE MERRIER

Here is a positive opportunity to win a national reputation. We are today suggesting to the Forester the possible wisdom of adopting a standard fire slogan, to appear under the F. S. shield on all official matter, and popularizing this slogan until it becomes as intimately known to the public as "57 Varieties". YOUR slogan might be so selected.

The supreme court of Utah reversed the judgment of the Seventh Judicial District Court and ordered a new trial in the case of Ignacio Martinez, who was sentenced to fifteen years in the state prison for murder in the second degree in connection with the killing of Rudolf E. Mellenthin, Forest Ranger who was murdered in the La Sal mountains on August 23, 1918. Martinez was convicted at his trial at Manti over a year ago, a change of venue having been secured. The jury brought in a verdict of second degree, and the Mexican was sentenced to fifteen years imprisonment. Ramon Archuletta, son-in-law of Martinez, and the man whose arrest Ranger Mellenthin was seeking as a deserter from the United States Army, is serving a life sentence after having pleaded guilty on a charge of killing Mellenthin.

To remove or eradicate red ink entries with liquid ink eradicators, best results will be obtained if the process used on black ink IS REVERSED. Use #2 first, blot and use #1.

The temperature in the Office today went to 95° and the bubble fountain did a heavy volume of business. Somebody (no, not Mr. Seip) suggested that the fountain product might have more kick if a raisin could be suspended in the bubble.

The District Assistant to the Solicitor left July 9 for Elko, Nevada, in response to the frenzied request for legal assistance from Supervisor Favre, who announced that Ranger Olsen has arrested one Delgado for grazing trespass. French left in great uncertainty as to whether Favre needed his help to hold Delgado or to turn him loose.

Work was started on the Alturas Lake Road during the month. This road will open up some very beautiful country, and it is expected that the completion of the road will cause a great many summer home applications to be made. The town of Jerome has already made a selection for a community site on the north shore of Alturas Lake, while Richfield will make a selection this week.

District 5 - California District

Word has been received at Washington that on July 10 an airplane engaged in forest fire patrol on the Modoc met with an accident which resulted in the death of the pilot, Wayman Haney, and two passengers, Antonio Salcedo and Harold Robie. Mr. Robie was the Forest Service observer, but was a new employee whose status has not yet been received.

Details of the accident have not come in from the field, and could not be obtained at the Air Service.

District 6 - North Pacific District

The North Pacific District flings down its challenge to the Southwestern District in a contest - "Oddities of Nature," or "Wild Life with the Forest Rangers." It herewith presents an exhibit, viz., "Mare's Eggs!"

Ranger Gribble found a "Mare's Nest" when he discovered the Mare's Eggs! (Affidavits gladly furnished. Madison, please note.) Be it known by the unenlightened that Mare's Eggs are known to us scientists as Nostoc pruniforme. Popularly speaking, the eggs are gelatinous balls, one-fourth inch to five or six inches in diameter, and are found growing on the rocks at the bottom of Mare's Egg Spring and other cold springs in the Klamath region of the Crater Forest. They belong to the water-inhabiting blue-green algae, which according to the present theory of evolution are direct ancestors of trees (Sunday Science Supplement style).

Mare's Eggs, so far as known, are harmless to the waters of a spring. The first ones sent in for examination were carefully placed in damp moss, but had entirely vanished when the package was opened. (Such are the wonders of Nature!) Later the Ranger sent in some more, in glass jars. Mare's Eggs are 99½% water. Twenty-five gallons of Nostoc would make only a gallon of dry food. (Figger it out again D-6- Ed.)

The Japanese, being great water lovers, eat Nostoc; it is not known whether they serve them medium-boiled or scrambled. While the local name is Mare's Eggs, the plant bears different picturesque names in different parts of the world - among them witch's butter, spittle of the stars, and star jelly.

Forest Examiner F. H. Cleator, Grazing Examiner F. B. Lenzie, and Entry Surveyor E. R. Johnson are making a preliminary survey from Mount Jefferson to Crater Lake of the proposed Oregon Skyline road, which eventually is to stretch from the Columbia River south along the summit of the Cascades to Crater Lake. Present plans are to make this route passable by a trail laid out on such a grade that later it may be made into a road. Forest Service signs reading "Oregon Skyline Trail" will be put up along the route.

Forest Examiner Wellman Holbrook can add a new story to any collection of Forest officer's experiences. While cruising timber in Alaska, he stepped into a trap set for a bear. Only the sole of his shoe was caught, but as he tried to release his foot the trap closed upon his hand. Mr. Holbrook, his hand still in the trap, had to carry and drag the 30-pound trap with the attached log over brush and fallen timber to his boat. Here he pried open the trap with wedge-shaped rocks, and released his hand, one finger of which was badly mangled. Had it not been for the moss and other debris covering the trap, his foot and hand would have been severely injured.

Secretary E. T. Meredith arrived in Portland July 9. July 10 he was entertained by local committees and honored at a luncheon given by the Portland Chamber of Commerce, at which the heads of all of the civic clubs were present, and many representatives of the different bureaus of the Department of Agriculture. The Secretary met the representatives of the Department of Agriculture in the Forest Service offices for a short talk, after which he was taken over the Columbia River Highway.

Irvin S. Cobb and Bozeman Bulger, of the Saturday Evening Post, A. Whisnant, editor of the Bend Press, and Supervisor Jacobson have planned a hunting trip in central Oregon in September. This trip is the outcome of Mr. Cobb's visit to Bend last year. It is to last 30 days and will cover nearly all points of interest in the Cascades. In a recent letter Mr. Cobb writes as follows of the horseback riding he may be expected to execute on the trip:-

"If we are to do any considerable horseback riding please have Mr. Jacobson send word ahead to his trusty man to have the kindest, gentlest, broadest beamed old mooly-cow in Oregon waiting for me. When it comes to horseback riding you would notice the difference between me and the late Colonel W. A. Cody almost at a glance. In fact I may say without fear of successful contradiction that, since the late Dr. Mary Walker died, I am the worst horseback rider that ever wore pants. My natural gait is a center. It doesn't make any difference what the horse is doing - whether he is loping, trotting, galloping, single-footing or standing on his head, I continue to canter."

He is authority for the statement that Colonel Bulger is the best camp cook that Alabama ever produced; "Jake" ranks high among such in Oregon, and will be chief K. P. We may expect to read all about this trip later in The Saturday Evening Post.

The airplane patrol is in full swing in the North Pacific District. In the first ten days of the patrol 30 forest fires were discovered and their location accurately reported by radio. The efficiency of the patrol is increasing daily as the observers become more and more familiar with the country covered. To date no accidents have occurred, though a plane was lost for some hours on July 7 on the trip from Roseburg to Eugene, being forced to make an emergency landing at the Mountain Meadow Ranger Station, on the Umpqua.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

July 26, 1920.

New District Foresters Announced

The Forester has selected District Forester Rutledge of District 1 to fill the vacancy at Ogden caused by Mr. Kneipp's promotion and transfer to Washington. Mr. Rutledge will be succeeded in Missoula by Mr. Morrell, Assistant District Forester in Charge of Operation in District 2.

Owing to the very intensive use of a number of District 4 Forests, the selection of an officer of wide experience in forest administration was unusually desirable. Official announcement of Col. Greeley's decision was made in the following letter sent to Mr. Rutledge:

July 22, 1920.

Mr. R. H. Rutledge, District Forester,
U.S. Forest Service,
Missoula, Montana.

Dear Mr. Rutledge:

I greatly appreciate the willingness which you have expressed to me to accept a transfer to Ogden, Utah, as District Forester in charge of District 4 of the Forest Service, notwithstanding your strong preference to remain in Missoula in your present capacity. Your work in District 1 has been efficient and does you great credit. You have had many difficult and trying situations to meet, particularly during the severe fire seasons of 1918 and 1919, and you have handled them well. Your transfer to fill the existing vacancy at Ogden is desirable for the good of the Service, only because of your special qualifications for administering that District with its highly developed and intensive use of the National Forests.

I will be glad to have you proceed to Ogden as soon as you feel prepared to do so in view of the current fire conditions in District 1, the completion of special matters which you are handling, and the personal arrangements necessary in connection with the change in assignment. Mr. F. W. Morrell will succeed you as District Forester at Missoula and will report there in the near future to familiarize himself with the District. He should assume the duties of District Forester whenever you decide that it is desirable.

I wish to express my deep appreciation of the spirit which you have shown in accepting this transfer and in subordinating your personal desires to the interests of the Service. It is a fine example of loyalty.

Very sincerely yours,
W. B. GREELEY
Forester

District Forester Rutledge will complete his fifteenth year in the Forest Service September 6, having entered as a Forest Guard on the Payette National Forest September 7, 1905. He has worked through the various grades from a Forest Guard at $60.00 a month upward as Assistant Forest Ranger, Forest Ranger, Forest Supervisor, Chief of Operation, Assistant District Forester, having charge at different times of the work in Operation and Lands, to the post of District Forester. He is in every way admirably fitted to succeed to the vacancy caused by Mr. Kneipp's promotion.

The vacancy at Missoula caused by Mr. Rutledge's transfer to the Ogden office is being filled by the transfer and promotion of Assistant District Forester Fred W. Morrell of Denver. Mr. Morrell completed his fourteenth year of work in the Forest Service July 1. He entered the Service as Forest Assistant on the Holy Cross National Forest and served on that Forest and on the Pike. Under the inspection plan of organization he was Inspector in District 2, and upon the creation of the new District organization was appointed Chief of Operation in the Denver office. He was promoted to Assistant District Forester in Charge of Operation January 1, 1910, which position he has held ever since, serving, however, as Acting District Forester for the long interval between Mr. Riley's illness and Mr. Peck's return from military duty and assignment as District Forester in District 2.

Both Mr. Rutledge and Mr. Morrell are broad-gauged, thoroughly seasoned officers of proven responsibility and splendid qualities of leadership, who are certain to conduct the affairs of Districts 4 and 1 along continued lines of stability and efficiency.

E. A. SHERMAN

(The following article was written back in 1916 when the author was a ranger, and was read before a ranger meeting in District 2. His ideas ane so sound, however, that they apply just as well as they did four years ago. New rangers, particularly those who have to meet adverse sentiment, will find the article full of valuable suggestions. -- Ed.)

"LOCAL OPPOSITION AND WAYS OF MEETING IT."

Local opposition in this instance has been construed to embrace not only opposition toward the Forest Service, but local and personal opposition among the users of the Forest. Opposition toward the Forest Service is at present a negative quantity; it has been overcome, or at least lessened thru divers methods, generally, thru humanness of the local officer coupled with the known loyalty of his superior officer.

The very first great essential in overcoming a skeptical user, is in the first meeting or acquaintance. If an officer upon first meeting a user will make such careful notes of the make-up of the man, and very essentially his name, it will serve him well at their next meeting. A man is always pleased to have a practical stranger greet him by his name; he will instantly note that the officer is observing. If an officer upon his first contact with a user will show an inclination to be just a little quiet, the user is very apt to show an inclination to be just a little talkative. Thus, there may be brought to the officer's attention, the point upon which the user fastens his grief toward the Forest Service. Just then, the matter of grief should not be discussed if it can be avoided. However, such mental notes of the user's grievance should be made as will enable the officer to compare the information gained with the records of his office. Information is seldom lacking in the instance of users, since there are invariably cases or memorandums which will throw greater light upon the subject. From information thus compiled one may readily formulate a plan of attacking the user's point of contention. Later, the user upon finding that the officer has considerable knowledge of the affair will be duly mystified. A mystery will attract any soul on earth and by forcing the user to conclude that you are a sort of mystery, he will begin immediate investigation of your affairs and work and eventually become interested to an appreciable extent.

It is not believed good policy for an officer to bring up points of contention with a user; rather let him bring up such points. If a user mentions his grief and shows a disposition to argue, the matter should be handled very discreetly. The officer should refrain from argument for the reason that the user's mind is in the rejective mood and before any new ideas may be inculcated, it must be in the receptive mood; hence, deal with the subject lightly. Do not talk too much. To be quiet does not impress a man with the idea that he has outdistanced you in an argument, or that he believes you ignorant. Quietness on the officer's part will merely sharpen the user's wit and create a desire on his part to extract more information from the officer; the user in this method of extraction will lay bare the weak points of his contention.

It is believed a very good plan to make note of very trivial things in which a user appears to be interested. Every man has a hobby; find out what it is without being inquisitive. If he has a team in which he takes pride, learn their names without asking him directly and upon your next meeting inquire how Jim and Dan or Bill and Buck are working.

It is not the intention that one should learn these things with a desire to use them in a braggart way as a sort of pat on the back of the user. The idea is to impress the user that you are seeing things, showing an interest. If he finds you observant in small things he is pretty apt to conclude that you are observant in large matters. He will take fresh interest in your work and with the many Departmental publications at hand an officer may easily palm some reading off on him that will fit his peculiar case and possibly afford him a different view.

Another great essential to be observed among users is a strict adherence to truth in all matters. Nothing will so shatter a user's confidence as a single grain of untruth coming from an officer. It gives him a distorted view of the entire Forest Service. You may put in months convincing a user that the Service is alright, and then lose it utterly by making one false statement.

Another essential is to always greet a user frankly and cordially but never intimately. One should make it a rigid rule to never speak disparagingly of one user to another. One should never discuss the affairs of one user with another unless they be notoriously public.

It has been found a profitable plan to send newspaper clippings to users whether or not they grieve. Many times items may be found which will bear directly upon a grievance or a hobby. It's impossible for a man to read without first placing his mind in a receptive mood and right there you may get him. The clipping does not raise his ire as a present forest officer might; there's no one around to make him mad and the clipping will in all likelihood make a good argument.

Newspaper clippings containing concise information in regard to pasturing, breeding, feeding and ranging stock, are easily obtained. An officer thru his close acquaintance with the user's ways and difficulties, can easily place a clipping where the bearing will be direct. The item may furnish him with information that he has been seeking with which to nurse his grouch, or further the interests of his hobby. Items should be initialed by the officer, or the wording, "Compliments of Forest Service" clipped on and mailed to the user, he will invariably appreciate the fact that you are taking an interest in him. This same policy has been followed out in a number of different lines and has been found to be one of the greatest confidence builders available.

It has also been found helpful, in overcoming opposition toward the Forest Service to "play policy". Adopt the policy of having at hand a nimble club; play policy by standing pat on the regulations and knock every user's head off (figuratively) who is so careless as to thrust it past the danger line. This scheme of policy must include every user regardless of age, political, financial or social standing. Unless one is prepared to be absolutely impartial, "pat and policy" had better be buried before disaster results. There must be no such thing as favorite or intimate. Make it plain that you have no friends and desire none, but make it equally plain that you do not desire enemies and that you bear no malice or ill-will.

On the Creede District of the Rio Grande National Forest, three years ago, both opposition toward the Service and local strife was a source of great difficulty and dissatisfaction to the encumbent officer. The previous described methods were those applied and results have been eminently gratifying. Possibly the matter of standing pat on the regulations was carried to a greater extent than herein described. The officer not only stood pat on regulations and rules but made it a part of the daily work, to lodge if possible, some specific charge of violation of regulations against each user which would impair his range preference, or cause the possible revoking of his other use. Where cases of this character were undertaken the user was usually notified personally by the officer of the officer's intention and why he harbored such intentions, thus the user was shown that everything would be done publicly and open. Ways and means were in most cases quite easily found and unhesitatingly used. Later, when the user realized his defeat or loss, he was re-established where practicable, in good grace. The immediate result of this agitation resulted in much good advertising for the Service; users soon realized that it was a force to be directed toward their own benefit rather than a sinister power to be discontented with.

A great amount of discontent existed among the users of the Creede District, especially among the range users, thru a misguided theory regarding preferential range rights. Much bitter feeling arose over charges of cattle theft, and the poor user charged that the wealthy user was being awarded the best of the deal because the wealthy user was in a position to feather the ranger's pocket book more to the idea of the ranger's exalted opinion of his importance. Each man claimed that he was the only one who had a decent bull on the range, another would not have enough, another the wrong kind, and still another none at all. Jerseys, shorthorn, Hereford and galloway all ran together. Without division fences the method was becoming irksome, and the "pot boiled on".

Local strife was found more difficult to contend with than opposition toward the Forest Service. In Service matters, the officer had excellent legal backing to carry out a program which would result in permanent good. But, in meeting local antagonism toward each other, the officer could not resort to authority.

It was early foreseen that local strife must be overcome before a reasonable degree of cooperation with the Forest Service could be obtained. However, the local trouble was successfully disposed of by banding the contending users in a Stockgrowers association, whose range rules would be enforced by the Service. Stringent rules were easy of adoption since each user showed a great inclination to approve any by-law in which he saw a method of hanging his neighbor. The local officer by being in close touch with each user's point of grief, recognized that it would be an herculean task to bring the users together and have them formulate a constitution that would work in harmony with the Service. To meet this discrepancy the local officer drew up a tentative constitution containing by-laws which would meet every particular point of grief or contention. A meeting was called; the manner and method of forming associations and the advantages which would accrue from one was discussed pro and con. The tentative constitution was read and re-read and its points carefully explained. It was made plain to the congregated that while the constitution as read was merely a tentative affair that it would in all possibility meet the approval of the Service. By-laws or regulations which it contained might be amended or added to as they preferred. It was further explained that if the association desired that their by-laws be enforced by the Service, it would be quite essential that the formation of the association and adopted by-laws formed and compiled be in accordance with the manual. After much heated argument and one threatened fist fight, the tentative constitution was adopted without dissenting voice. Thus is strife overcome.

In conclusion: It is a safe assertion that charity begins at home. It is a foregone conclusion that where strife and petty jealousies exist among the officers of a National Forest, that the strife and jealousy will extend on down to ranks of users. A ranger who does not possess the confidence and fellowship of his superior officer is ill equipped to contend with field matters that so nearly approach diplomacy. Unless a supervisor possesses the absolute confidence of his men, a willingness and desire on their part to carry out his general plans of administration, then the matter of cooperation, system and business will be lost and the strife again reach down to the ranks of users. Loyalty, is the word which, if adopted, will overcome in many indirect channels, all forms of grief against the Forest Service. Be loyal to the Department which pays you for your labor, loyal to your supervisor, and loyal to your fellow officers. Work as a unit, not separately. If there is strife on your district to overcome, see to it that within your own organization that strife does not exist.

Where harmony exists between the users of a Forest, and their grievance against the Forest is nil, there is harmony and loyalty among the officers of that Forest.

STEPHEN E. DOERING

Our Letter Box

LEMHI NATIONAL FOREST.

Mackay, Idaho.
July 13, 1920.

Editor, Weekly Bulletin,
Forest Service,
Washington, D. C.

Dear Ed:

Referring to the cowpuncher - lion episode mentioned on the bottom of page 9 of the Bulletin for June 28.

Did the lion catch him? A cowpuncher who will run 75 yards surely is entitled to live but lions are notoriously long-winded and if the chasee wore chaps and high heeled boots we would say the chances were against him. Have applied all our powers of deduction to the case and have been unable guess the sequel. We are keen to know.

ANXIOUS.

Sorry to disappoint you, Anxious, Old Top, but as to the winner of the afore-mentioned Marathon, the record sayeth not. From the facts at hand it is apparent that either the "chasee" escaped to tell the tale, or that enough tracks and other evidence were left for the District 3 sleuths to read the story of the crime in true Sherlockian style and get a warrant for the right lion. After all, what is one cowpuncher, more or less, to such hardened man-hunters? You've got to have a victim for every crime, but the victim doesn't matter. He's bait - the "bleating kid", so to speak. Your question is rather irrelevant, after all, Anxious. You should have been concerned to know whether the lion escaped. Perhaps the Coconino will finish the story. -- Ed.

Discussion for Weekly Bulletin July 14, 1920.

SEEING OVER AND UNDER THE FORESTS.

The National Forests consist of vast stretches of mountain wilderness very inadequately developed and civilized. The areas are too large for the mind to grasp. Even an average ranger district is entirely too big to picture mentally in all of its details. A farmer with 160 acres of land can very easily carry a mental picture of practically every detail of his farm. He knows exactly how many different fields he has and not only what crops are planted in each one now, but he can remember what was produced in each field for several years past. The National Forests, however, have too many hills, too many trees and too many streams to make it possible to carry any such mental picture. These forests must be developed and properly managed.

There is only one answer to such conditions and that is paper work - plans. We must get down on paper, where they can be looked at, representations of the forests and the plans under which they are to be developed. Such plans are needed for the fire work, improvement, grazing, timber management, recreation and every other activity. They are needed in order to see both over and under the trees, by which I mean it is necessary to get not only a perspective but a vast amount of detailed information in order to develop and manage the resources properly.

An improvement plan shows the forested area in a general way and indicates the different projects already built and those needed. This is followed by detailed plans and specifications for each trail, telephone line, or building as funds become available for construction. This process must be repeated for every activity - the over plan and the under plan, the perspective and the detail.

Timber management demands the same sort of plans. All the Forests are making another attempt to get the general perspective control plan down on paper and that is and must be followed by the details. Useful words to use in systematizing timber management and upon which to hang the data, are working circles, blocks, compartments. The latter is the smallest unit we are likely to have occasion to use for some time. It usually includes a small watershed.

Every timber cutting operation starts the wheels of management of the timber resource within a compartment. The success of the management depends upon the vision shown in the perspective plan and upon the skill shown in following it out in each compartment where cutting is in progress. An opportunity presents itself with every timber sale to get the data needed for the detailed specification for that compartment. Why worry about lack of detailed information in areas which will not be cut for years to come? The present opportunity is to get the information for the compartment where the cutting is in progress while the camps are in and the administrative force on the ground. What effort is being made to make the detailed plans for small compartments where the demand for timber already exists? To secure for the record not only the number, size and rate of growth of the trees left standing on the sale area, but of those left outside the sale boundaries and inside the compartment lines?

JOHN F. PRESTON.

Reynolds Heads District Rifle Team

"Bobby" Reynolds is making his plans to attend the national rifle matches which are to be held at Camp Perry, Ohio, in the near future. He is captain of the District team and one of its best shots and is expected to make some high scores.

National matches are held annually under direction of the War Department and occupy a period of four weeks. The last week of the event is usually the most interesting as during that time the Army, Navy, Marine, and civilian and military teams from most of the States compete in the national individual matches, the national pistol matches, and national team matches. Reynolds was a member of the District of Columbia team which won the championship in 1918 and was captain of the team last year, being re-elected for this year. It is being freely predicted that the District team will bring home the bacon again.

The Ultimate in Utilization

When members of the Laboratory started making roofing out of the bark of trees, enterprising journalists compared their efforts to those of the packers in attempting to utilize the squeal of the pig. Comes now a proposal to put the much abused knot hole to work. Here is the big idea: Take a small piece of inch board that has a knot hole in it; square it up, with the hole in the center; glue it to a $\frac{1}{2}$ inch wooden base; give it a bath of varnish. Behold the result! A handy receptacle for clips, fasteners, and the like. Some novelty.

Now we can confidently look forward to the time when mills will think nothing of getting out a carload of knot holes. F. A. S. S. 2 S. (No jokes allowed on this item.)

Chambers of Commerce to Help Farmers

During the last week representatives of the chambers of commerce at St. Louis, Chicago, Muncie, Indiana, and Roanoke, Virginia, visited the Department for the purpose of getting in touch with what is going on. The chambers of commerce in the cities named are back of a movement to bring the business men in the cities to a full realization of their dependence upon the development and prosperity of the primary industries immediately surrounding their cities. The movement was begun in St. Louis something over a year ago and is reported to have had considerable success, although it has spread rather slowly to other cities.

It is understood that an attempt will be made in the near future to nationalize the movement by the formation of some central organization. In addition to bringing about an appreciation of the importance of agriculture, forestry, et cetera, among city business men, the movement includes the idea of aiding the farming and other primary industries in every legitimate way.

The purpose of the visit to the Department was to become familiar with the activities of the Department and to learn how the chambers of commerce can assist in furthering the work. Three members of the conference visited the Forest Service and spent some time in getting a line on our activities. They were furnished with an assorted supply of reading material, including, of course, the Capper Report, and considerable information regarding the things we are doing and want to do. All of them appeared interested in the work and seemed to be anxious to do whatever they could to help us. If the chance comes we will certainly take advantage of their offers.

Ups and Downs in Supplies

The demand for supplies is going up and the money available is going down. The downhill slide is in double quick time because of the decrease in the equipment and supply item in the appropriation bill and the decreased purchasing power of the dollar.

For the fiscal year 1921 the appropriation bill carries, for the purchase of equipment and supplies, $150,000 as against $161,100 in last year's bill. In submitting the estimate to Congress the Forest Service placed the figure at $172,400. This figure was determined only after careful study and consideration of the demands that would be made against the item. The Senate recommended the old figure of $161,100, but in conference the economy streak hit this item and so we got only $150,000.

We will need more than a budget system to make this money go round. We have got to exercise the utmost ingenuity and economy. It is not a question of cutting out unnecessary purchases. Our lean pocketbook made us do this several years ago. We are forced to choose between necessary purchases and, where they are equally essential, flip a coin to make the decision.

Now for some figures.

During the fiscal year 1914 the Supply Depot expended on supplies $127,580, in 1917 $102,851. For the fiscal year 1920 the estimate submitted is for $103,134. Of the amount given for 1917 $12,500 was expended for freight, express and postage, and it is estimated that in 1921 not less than $15,000 will be needed for these items.

The question of furniture and sectional unit equipment is also an important one as the cost is great and under present conditions it is becoming serious. Full records for the past year are not just at hand but for the first nine months of the fiscal year the following equipment was purchased:

Chairs, bentwood	$800.00
Chairs, office, oak	532.35
Sectional units	2768.93
Map filing cabinets	223.96
Office tables	1095.00
Typewriter stands	156.00
Miscellaneous	916.00

The purchase of furniture for ranger stations is a very live one due to the increasing number of separate field offices. Having a separate office, it is no longer possible for the Forest Service to call on the ranger and his wife to devote the dining room and kitchen table for official purposes but puts it up to the Forest Service to furnish special office tables and filing cabinets in place of Hoosier cabinets used for that purpose in the good old days.

In telling us of his difficulties Mr. Cousins made for our benefit a comparative statement of cost of supplies carried at the Ogden Depot, as follows:

Article	FY	Cost	FY 1921	Unit
Books, stenographic	1917	$2.82	$8.00	Doz.
Calendar pads	"	.15	.25	ea.
Cloth, tracing, "Imperial" 36" x 12 yd. roll	1914	3.85	9.11	roll
Cheesecloth	1917	.032	.095	yd.

Folders, manila, letter size	1917	.293	.80	100
Clips, gem	1917	1.70	3.40	100 bxs.
Carbon paper 8x10½	1917	.33	.57	100 shts
Pencils, writing	1917	.26	.30	doz.
" indelible	1916	.30	.63	"
Paper, T. W. linen	1917	.15	.2495	lb (Note 1
" mimeograph	1917	.054	.1268	"
" yellow	1917	.0585	.1644	"
Ribbons, typewriter	1917	2.30	3.75	dz
Flags 3x5 (1917 wool (1921 cotton	1917	1.85	2.13	
Typewriter stands	1914	3.48	8.50	ea.
" desks	1914	22.00	49.50	"
Tables, 50"	1914	12.25	31.40	"
" 60"	1914	13.25	36.25	"

(Note 1--Typewriting linen 1917 on 100% rag stock. 1921 on 50% rag stock.)

Economy, first, last and all the time, has got to be our motto until things ease up.

PAUL D. KELLETER

The New Best Seller

"Tales from the X-Bar Horse Camp" is the title of a little volume of short stories by Will C. Barnes that is just off the press. Mr. Barnes, of course, is a well-known author and getting into print is no novelty for him. The book which he now presents to the public looks good from the outside and a glance at the table of contents indicates that the stories are "up to snuff". Readers of the Bulletin are familiar with Mr. Barnes' style and know his inimitable way of telling a story. Certainly no man in the Forest Service has had more experiences than he, or knows better how to tell them. "Tales from the X-Bar Horse Camp" ought to be a big success.

That Economical D-4 Fordarrow

The journey through the wilds of the San Pete valley and the Kaibab country covering 1146 miles in a "Henry" at a cost of but $45.38, or 4 cents a mile, leaving the fine sum of $34.84 out of the allowance of 7 cents a mile to cover "depreciation, taxes, interest and other charges", indicates a need for revision of the auto allowances for that district--and perhaps that particular "Henry". As the cub reporter says, "This is interesting - if true." It is evident, however, that the trip was made on the rims, inasmuch as nothing was said as to tire costs. Had the lil' ole boat been equipped with those articles--which most of us foolishly consider essential to comfort in riding, the full figures would have shown quite a different result. Taking the average cost of four new tires of good grade with casings for a Ford, one is out about $100 simoleons. Now the average life of the average tire on a Ford is not over 4000 miles and with four tires it makes the mileage cost for this one item at least two and one-half cents. This would have left but $5.25 with which to reimburse the owner. But of course where one doesn't use tires there is bound to be a considerable saving - in tire costs.

W. C. B.

A FOREST TRAGEDY

He left his camp fire burning to see if the Lookout would pick it up.
He did.
He thought this would be a good test to see if the District Ranger was on the job.
He was.

He wondered if a fire would burn very fast in the dry forest.
It did.
He thought he could get away before the Ranger could catch up with him.
He couldn't.
He thought he could bluff the Judge at his trial.
He didn't.
He wondered if the Judge would have the nerve to sentence him to jail.
He did.
We wonder if he will put out his camp fire the next time he is in the forest.
HE WILL!

J. D. G.

How Can We Make Every Dollar Do the Most?

We have gotten into the habit of preaching economy because our financial resources have seemed inadequate. What we would rather do is to preach economy for economy's sake. If our appropriation was twice as large, we should be just as careful in the expenditure of our funds and if the appropriation were only half as large there would be no better real argument for the practice of economy than there is at the present time. How would you spend the money if you had to go down into your left hand trouser's pocket for it? It is assumed, of course, that you are a successful business man in the handling of your personal affairs.

The size of the telephone tolls incurred by some of the Forests would surprise even the Supervisor who incurred these charges. It is handy to reach for the telephone and call long distance. Sometimes it is necessary - sometimes only convenient. We have had a good many calls from the field over long distance recently and several expensive bills have come in. No less than $4.00 has been spent on several occasions for one call. Could not a telegram have been sent instead, or better yet, by the aid of a little foresight would not a letter have served as well? Another example: We specifically requested our fire reports by night wire and yet about a quarter of them are sent by day wire. A day wire costs 20¢ while a night wire costs 15¢. This is only a nickel, it is true, but it is a saving at 25% just the same. Savings can be made not only in nickels but in minutes. For example, we pointed out on several occasions that the automobile mileage letters should be prepared in quintuple but instead of getting five we are still receiving from two to six copies. If only three copies are received, the question arises as to whether we will make the additional copies or write to you to do so. Although our first inclination is otherwise, they are usually made here. It only takes a few moments probably, but nevertheless it is just that much time wasted.

These are only a few of the "leaks" which come to mind but you can probably recall several others. We would even admit that such a thing is possible in the District Office. We do not want a penny wise and pound foolish policy. A $2.00 telephone message might possibly save $100 of Improvement money and a 75¢ telegraph message might do the same thing, while on the other hand a little careful planning and a 2¢ postage stamp might have done as well. What we are after is common sense economy.

D-4.

District 1 - Northern District

In the fall of 1917, Forest Examiner Baldwin sent seed obtained from corkscrew and straight-grained yellow pine on the Sioux Forest to the Experiment Station with the idea of determining whether the corkscrew or spiral characteristic is inherited, or the product of climatic environment. The plants have been set out side by side in the field at the Priest River Experiment Station, and it is noted that the seedlings from the cork screw source are much larger and sturdier than the others. They also survived the winter better and suffered less frost heaving in the spring because they had a better root system. In measuring the seed it was found that seeds from corkscrew yellow pine were larger, plumper in appearance, and more mottled than those from the straight-grained trees. The sizes of the varieties are as follows:

	Length	Width in millimeters	Thickness	Weight of 300 seeds Grams
Corkscrew form	7.56	4.92	3.17	18.51
Straight-grained form	6.47	3.98	2.77	8.51

A cutting test showed the seed from corkscrew form 84% good and the straight-grained only 44% good. Consequently, there are only half as many of the corkscrew seeds per pound, but the germination in the nursery is much better. It will be a matter of great interest to note the rate of growth of these seedlings, as well as the character and quality of wood produced.

J. A. L.

District 2 - Rocky Mountain District

District Two was honored last week by a visit from the Secretary of Agriculture accompanied by Mrs. Meredith and Assistant Secretary F. R. Harrison, who arrived in Denver on the evening of July 14.

A meeting was held in the New Federal Building on the morning of July 15 of the Denver representatives of the ten bureaus and offices of the Department. The Secretary asked many questions regarding each line of work; and urged that the Denver representatives of the Department devise some means for becoming more closely associated. It is planned to carry out the Secretary's desires by organizing an association for this purpose early next fall.

The Secretary was entertained at luncheon by the Denver Civic and Commercial Association where he addressed a large gathering of business men and State representatives of the agricultural industry. He told of the Department activities and the manifold ways in which it is keeping in touch with the well-being of every citizen, and made a very strong plea for the betterment of salary conditions in the Department. His address made a very deep impression on the audience and was quoted fully in the press.

In the afternoon, the Secretary and his party drove by automobile to Estes Park, accompanied by Mr. J. S. Bright, District Engineer of the Bureau of Public Roads, and the District Forester. The party was met at Estes Park by Supervisor H. N. Wheeler of the Colorado and the following day was spent in seeing something of the National Forest and the National Park. Assistant Secretary Harrison was taken on a horseback trip to the top of the Twin Sisters Lookout and an opportunity was given to explain to him a great deal of the Forest Service field activities. On Saturday, the party drove to Fort Collins where they were entertained by President Lory of the State Agricultural College and a number of citizens. From there, the party returned to Denver and the Secretary left in the evening for his home in Des Moines, Iowa.

District 3 - Southwestern District

According to a news item from a Flagstaff paper, a survey of a road to the top of the San Francisco Peaks is being made, the road to be built by the San Francisco Mountain Scenic Boulevard Company.

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"Talk about your community service! Ranger Wingo, since the installation of the hot water system and bath tub at the Weed Range Station, had been besieged by his neighbors with their children requesting the privilege of its use. Wingo thinks he has a kick to register, however, in that they fail to bring the necessary towel and soap." Lincoln Weekly Bulletin.

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"Dr. G. N. Thomas and Mr. Glen O. Everman, officers of the El Paso organization of Boy Scouts, were recent callers at the Supervisor's office relative to the matter of obtaining suitable camp grounds under term lease on the Lincoln National Forest for use by this organization each summer. Arrangements were made for an early joint inspection, by Supervisor Arthur and the above gentlemen, of the areas suggested as suitable for the purpose." Lincoln.

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The Apache Forest figures as the background of two recent novels,- one, "The Forest Man," by Zane Grey, and the other, "In the Great Apache Forest," by James W. Shultz, of Greer, Arizona. The latter is a book for boys. Hannah Crosby, Lookout on the Apache a couple of years ago, figures as heroine under her real name, and with her brother takes part in adventures with fierce grizzlies, incendiary I.W.W.'s, who cause the Forest Service much grief, and with Indians.

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"A party of automobile tourists were enjoying a picnic dinner across the road from the Cliffs Store at the Greenlaw Mill. They had a camp fire where they made their coffee, and later all went into the store to buy some soda pop, etc., leaving their fire smoking a little. While in the store they spied the "PUT OUT YOUR CAMP FIRE" picture, and directly several women and a man or two got buckets, filled them at the horse trough nearby, and literally drowned their fire."

C. L. L.

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Any unusual noise heard over Santa Fe may in the future be no cause for investigation. There will be nothing to investigate. We had our dreams of a quiet Fourth rudely broken by the insistent voice of the Station Agent telling us on the morning of July 3 that there were ten tons of TNT at the depot for us, and to move it D--m quick. After some skirmishing (teamsters all on a strike or busy) finally landed a State truck and with much labor got the stuff all tucked safely in bed five miles up Santa Fe Canyon in the gloaming of July 4.

Santa Fe.

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The Reserve - N Bar Ranch Trail, 30 miles in length, on the Datil National Forest, has been completed. This is one of the most important trails on the Datil, as it will be used not only for forest protection and administration, but will be of great value to the livestock industry in salt and other supplies.

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This letter just received:
Office of Arizona State Prison, Florence, Arizona, July 7, 1920.
"U.S. District Forester:
Dear Sir: Will you please send us a list of the Forest Rangers in Arizona and New Mexico with their forest office addresses?
Appreciating the favor, etc., Very truly yours, Ben H. Stillman, Secretary."

Is this an invitation or a threat? It must be the former, else he would include Supervisors!

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"Ranger Garvin Smith with headquarters at Cloudcroft last week accompanied groups of the Boy Scouts of the El Paso organization in camp below Cloudcroft, to the Wofford Lookout Tower where the National Forest fire protective system was explained to them in detail. The boys showed themselves to be intensely interested in the methods employed and tentative arrangements have been made between the officers of the organization and the Forest Supervisor for the inclusion in next season's field plans of a scheduled study of general forest administration under the direction of a forest officer." Alamogordo News.

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"Ranger Hendricks has certainly made a record for himself this season in the way of trail improvements without any great expenditure of improvement money. Besides the relocation and clearing of a major part of the Pine Lodge trail, the Pierce Canyon and Seven Cabins Canyon trails were improved and a new trail blazed and brushed out from the mouth of Seven Cabins Canyon to the Block Ranger Station. Trail improvements of this character, that is, a little manual labor on the part of the District Ranger, had practically become a lost art on the Lincoln, to be saved at the last moment during the season of 1919 by Ranger Smith on the Mayhill District now followed by Ranger Hendricks on the Capitan Mountain District."

Lincoln Weekly Bulletin.

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"No more striking example of the destructive effect of grazing upon the willow growth along stream's courses can be found than in the five or six mile stretch of Santa Fe Canyon above the Water Company's reservoir. Scarcely a trace of the original cover remains. The granite strewn washed out stream-bed is one of the most obvious results. The Forest Service administers the Santa Fe Creek Watershed with the aim of protecting Santa Fe's water supply but its work is in a measure nullified by the Water Company's indifference to the grazing of stray stock along the stream course which they own. That it can be revegetated and brought back to its original beauty is fully demonstrated by the results brought unconsciously through our fencing the Granite Point Ranger Station a few years ago. Our pasture covers the stream bed for about one-fourth mile and within it there has sprung up a most promising young growth of willow and birch. We see an opportunity for some missionary work." Santa Fe Bulletin.

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"Mrs. Cook, wife of Ranger George H. Cook, recently took the lead in organizing a meeting among the Spanish American people at Tijeras. She secured musical talent from Albuquerque, as well as several speakers, including Mr. Hammond of the District Office, and County Agent Crawford. About 75 people attended the meeting. The purpose of the meeting was to make plans for advancing the social and economic welfare of the community. The tentative program is (1) to instruct the farmers in better methods of agriculture, (2) to instruct the women in such things as poultry raising, cheese-making, food-preserving, cooking, care of children, etc., (3) to establish a maternity hospital at Tijeras (4) to provide entertainment in the way of music, lectures, lantern slides, etc.

Mrs. Cook has enlisted some influential support and the outlook is promising. It is an admirable project. When New Mexico realizes that its most critical educational and social problem is to raise the standard of living and of education among the native people, it will be taking a long step forward. Has the Forest Service realized its own opportunities in this question, or have we not rather adopted the prevailing spirit of apathy and neglect?" Manzano Ranger. 7-9-20.

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District 4 - Intermountain District

The item relative to the cost of operating a Ford reads like a sales agent's literature. If we were trying to run a jit on 7¢ per, we would probably bring forth a "counter charge", but as it is we will just go on record to the effect that if you buy a Ford on the strength of the article above mentioned, don't try to recover your losses from us if the figures don't hold out. --Cache.

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The "unprepared" speaker arose before the audience. He was to speak on the lives of Washington, Jefferson and Lincoln. Being somewhat forgetful, he had pinned their names on the inside of his coat on the right.

"Dear friends," said he, "I am about to speak of three great men whose names are indelibly printed on our minds; no true American can forget them."

Then opening the left side of his coat instead of the right, and peeping in, he said: "I speak of Hart, Shaffner and Marx."

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The Nevada Forest is still maintaining its 100% record in fire law enforcement; as witness the following clipping:

"Francisco Liseraldo was yesterday afternoon fined $20 in the justice court on a charge of setting a forest fire at Berry Creek. The complaint was entered by Forest Ranger L. E. Tooman. This was the second offense of this nature in the Nevada National Forest this season."

Good work, Tooman. Good work, Nevada. This kind of Fire Prevention work is going to make the careless or wilful setting of forest fires a very unpopular pastime in your locality.

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Some people think Forest land is not very productive from a financial standpoint. Look at this:

We sell poles under 4" at 3 cents each. Recently areas near the Basin Patch on District Two were counted which would average from 6,000 to 10,000 trees per acre or from $240 to $300 per acre. Sounds fishy but it's true. Furthermore, acres can be found which will have 25,000 trees averaging 8 to 20 feet in height. This is lodgepole pine. Our principal demand is for poles and it looks like we could raise 'em. At least nature did without man's aid and we believe we can help. A management plan for such a demand and such stands as we have is going to be a hard job, but it must be done. --Minidoka.

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On July 9 word was received from Ranger Olsen that he had arrested Adrian Delgado for repeated and wilful trespass and that he was bringing said Delgado to Elko to place the case before the U. S. Commissioner. Mr. Olsen arrived with the prisoner and several witnesses in Elko on the evening of July 9, a warrant was immediately issued by the U. S. Commissioner and the prisoner released on his own recognizance after furnishing $500 bail. The morning of July 10, Mr. French, Assistant to the Solicitor at Ogden, arrived at Elko, and a conference was had between the defendant, his lawyer, and the Forest officers involved. An agreement was reached whereby the trespasser paid a fine of $200 and costs, or a total of $250, for his release, which was given with caution of heavier penalty for another offense.

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Mr. G. W. Lorenz, Tie & Timber Agent of the Union Pacific System, which includes the U. P., O. S. L., and O. W. R. & N. Companies, was a recent caller at the office this afternoon. Mr. Lorenz announced that he is a lodgepole pine man and hopes to see this species of timber used extensively by the entire Harriman system in the course of time. He stated that during the coming year the Union Pacific proper will need approximately one and one-half million railroad cross ties and that it would not hurt his feelings at all if we could locate some man who would volunteer to cut and deliver a couple hundred thousand ties to their Company in the near future. If any Supervisor knows of an operator who might be interested in this work he might promote not only the interests of the Forest Service, but the Union Pacific System as well by requesting him to communicate with Mr. L. V. Guild, Purchasing Agent, Oregon Shortline Railroad, Salt Lake City, Utah. Mr. Lorenz cites an astonishing number of records of long service of lodgepole ties which no doubt will be a factor in promoting the wider use of this species for railroad purposes.

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More Statistics on Cost of Running Ford

Evidently the cost of running a Ford varies considerably. Ranger Quate has the following report to make for his Ford during June, traveling 125 miles, reimbursement $8.75:

7 gallons gasoline at	.60	$ 4.20	
½ " oil "	1.60	.80	
1 front spring		5.00	
Labor for putting in same		2.00	
1 coil (old one burnt out)		1.75	
1 ball & socket joint for end of radius rod		.30	
Labor for putting in same (including piston rings)		12.00	
1 set piston rings (including 4 Never-leaks)		6.80	$32.85
Wear on tires at 2¢ per mi.		2.50	
Depreciation, " ½¢ " "		.62	3.12
			$35.97

The ball & socket joint which cost 30¢ could only be attached to crank case by taking engine from car, removing lower half of crank case and riveting socket joint in place. While the engine was down the garage man recommended new piston rings.

Tire costs were figures on a basis of four tires at $20 running 4,000 miles, which is actually the usual mileage of tires on roads in this vicinity.

Depreciation of car was figured by granting that it is worth about $400 at present, having run about 15,000 miles. After 10,000 miles more it will probably be worth about $350, or a depreciation of $50.

The cost per mile of running this car through the month of June was approximately 29¢.

District 6 - Northern Pacific District

Based on the Visitors' Register at Eagle Creek Camp Ground, there have been over 50,000 people at this Camp Ground since April 1, when the Ground opened. The register shows residents from almost every state in the Union; Secretary Meredith's name appears on July 10.

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The mountainous districts of the Washington and Okanogan Forests, northern Washington, are to be visited this summer by two parties of naturalists:- one of the Biological Survey, which will study plant and animal life on the Washington and Okanogan, and the other including John A. Keating, president of the Lumbermen's Trust Company, Portland; William L. Finley, the naturalist; Stanley Jewett, of the U. S. B. S.; and L. A. Nelson, formerly of the Forest Service and now of the West Coast Lumbermen's Association; and F. I. Jones, who took the color photographs of the "Valley of Ten Thousand Smokes" in Alaska. The latter party will investigate on the Washington Forest, along the upper Skagit River, near the Canadian boundary, in much the same territory covered last year by Mr. Keating and Supervisor Park. Mr. Park has been informed also that the Mazamas will visit his Forest July 31 to August 15, for ascent of Mount Baker.

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"A Girl Alone in the Cascades" appears in the August number of The Green Book, by Henrietta McKaughan, a reporter on The Oregon Journal, of Portland. The story describes a hiking trip taken last summer by this young lady, who has just started on a similar trip to the Olympic. Although the story states clearly that the trip was taken on a National Forest, the editor, knowing better (?), added a paragraph or so about this "national park" and national parks in general. Some day the public may possibly understand the difference between a National Forest and a National Park.

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Among the many beauties of the National Forests yet to be made known to the public is Lake Hozomeen, near the Canadian border, on the Washington. Supervisor Park availed himself of an opportunity to tell of it at a recent informal meeting of the Whatcom County Sportsmen's Club. He mentioned its having been recently stocked with 40,000 cut-throat trout and that it is one of the most beautiful lakes in the Northwest, although little known to tourists. At this meeting it was announced that Professor J. N. Cobb, of the fisheries department, University of Washington, with a party, will begin a preliminary biological survey of the lakes and streams of Whatcom County, Washington, this summer, which will be of immense benefit in planning future propagation of game and fish; and is in line with similar surveys made by New York, Wisconsin, and other states.

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Elijah Coalman, Mount Hood lookout, has resigned from the Forest Service to engage in farming. Mr. Coalman occupied the Mount Hood lookout station from the time it was first established, in 1916. During the 1918 season he resigned because of injuries and sickness resulting from an encounter with an avalanche, but he went back on duty the following season. For years before entering the Forest Service, Mr. Coalman made his summer headquarters at Mount Hood, where he acted as professional guide for mountain climbers. Mr. Coalman himself had a narrow escape from death in a crevasse at the time the avalanche caught him. He was rendered unconscious by a flying rock, and upon regaining his senses , found himself on a narrow snow bridge that extended over a crevasse. He is an authority of Mount Hood and its surrounding territory.

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Engine trouble while flying at an elevation of 9,000 feet compelled an airplane of the forest patrol to make a forced landing July 7, 50 miles (or about one hour and fifteen minutes) north east of Medford, after the plane had started on its return trip to Eugene. The plane was just out of range of Medford and Roseburg when the engine went dead, and since the "juice" for the wireless equipment is generated by wind velocity when the plane is in the air, no S.O.S. signal could be given. The pilot and observer were unhurt.

Cadet Hyers, the pilot, is quoted as follows: "We spotted the best landing in sight and fortunately picked out a fairly clear spot. In landing, we tore off one of the lower wings, and then we nosed over, wrecking the wings and fuselag beyond repair. We took out what stuff we had in the ship, and after looking over our maps pretty thoroughly to get the lay of the land started out for the Big Camas station. Our maps did not show any trails, so we went through the woods. We were out over night, and went over 24 hours without food and we were sure glad when we hit the ranger station and could get something to eat. A trip in the Umpqua Forest is worth any man's time, although it is not very much fun to be dumped in the middle of it when you're not prepared for it. The wings and fuselage of the machine are a total wreck, and anyway the most valuable parts of the machine are the motor and instruments. They can be taken out in sections by way of Diamond Lake."

District 7 - Eastern District

District Seven is congratulating itself on the fact that with the wind-up of the fiscal year 1920 and the final balancing of accounts, it finds itself at last on a practically self-supporting basis. The total allotment for the District in 1920, including statutory roll, G. E., G. A., Lands, Planting, Timber Surveys and Improvements, amounted to $213,302. The receipts for the year are $211,369.40, a gain of $51,560.13, or 35% over last year. If those portions of the planting, timber survey and improvement allotments, which are properly chargeable to new investments rather than current expenses, were deducted, a slight profit for 1920 would be shown.

The total acreage of the District, including public lands, acquired lands and lands under purchase agreement, is in round figures 3,140,000 acres. Based on this acreage, the expenditures are 6.78 cents per acre and the receipts 6.73 cents per acre. Of this 3,140,000 acres, however, 408,000 acres are still under purchase agreement. The Government has not yet taken title to them and therefore has not been able to do any revenue producing business upon them. The receipts per acre for the 2,732,000 acres to which the Government has title and from which it can sell the timber and other economic resources are 7.73 cents.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

August 2, 1920.

Forest Products Laboratory Celebrates Its Decennial

The Forest Products Laboratory celebrated its Decennial at Madison, Wis., July 22-23. Over 200 visitors from all parts of the country were present, representing every line of wood-using industry, including 59 wood-using associations and companies, 18 lumber manufacturing associations and companies, the Deans of 12 Forestry Schools, and other visitors and friends. The celebration was from every standpoint an unqualified success, and should give renewed impetus to the work of the Laboratory as well as making the institution still more widely and favorably known.

The celebration was in charge of a committee made up of Governor E. L. Philipp of Wisconsin, Honorary Chairman; H. F. Weiss, Burgess Laboratories, Madison, and former director of the Laboratory, Chairman; C. P. Winslow, Director, Forest Products Laboratory, First Vice-Chairman; H. J. Thorkelson, Business Manager, University of Wisconsin, Second Vice-Chairman; and Don E. Mowry, General Secretary, Madison Association of Commerce, Executive Secretary. It was financed by subscriptions from citizens of Madison and other friends of the Laboratory, who responded so enthusiastically to the touch for funds that approximately $6,000 was collected. The balance over and above the expenses of the celebration will be used to publish the proceedings.

The opening session of the gathering convened in Agricultural Hall at ten o'clock on the morning of July 22. H. F. Weiss was chairman. The program of addresses included Mr. Weiss's introductory remarks; "Legislative Measures for Forest Conservation", by Governor Philipp; "Translating Knowledge into Power", by President Birge of the University of Wisconsin; and "The Forest Products Laboratory", by C. P. Winslow, present director of that institution.

After luncheon the program continued with inspection of the work and exhibits of the Laboratory. Guides in charge of small parties showed the visitors the various lines of endeavor in which the Laboratory is saving millions of dollars a year to the people of the country. Following the inspection trip was a period for recreation in the form of automobile tours around the city, boat rides, and swimming.

Nearly 500 prominent lumbermen, manufacturers, and users of forest products and members of the Forest Products Laboratory attended the banquet in the evening. Mr. Burr W. Jones presided as toastmaster. Colonel Greeley spoke on "Forests and National Prosperity", and Mr. Max Mason, Research Specialist of the National Council of Defense, gave an illustrated talk explaining in detail the submarine detector which he perfected during the war and which was successfully used in European waters.

At the Friday morning session, Mr. John Foley, Forester for the Pennsylvania Railroad, was chairman, introducing the speakers as follows: D. C. Everest, Secretary and General-Manager, Marathon Paper Mills Company, "Some Problems of the Pulp and Paper Industry"; H. E. Howe, Chairman, Research Extension Division, National Research Council, "America's Place in Industrial Research"; and W. A. Gilchrist, representing the National Lumber Manufacturers' Association on "Some Problems of the Lumber Industry".

The formal program of the Decennial ended with a luncheon. In the next issue of the Bulletin a further account will be given of some of the more notable points brought out by various speakers at the meetings.

Conference on Reforestation

Immediately after the Decennial a conference on reforestation was held. The participants in this conference were representatives of Federal, State, and lumber-producing interests. Twenty-nine wood-using industry associations, 8 lumber manufacturers' associations, 30 wood-using companies, 10 lumber companies, 10 trade journals, and 15 forest schools, State departments of forestry, and foresters' associations were officially represented.

At the close of the conference the following resolutions, which had been introduced by Don L. Quinn, representing the Chicago Mill and Lumber Co. and also the National Association of Egg Case and Egg Case Filler Manufacturers, were unanimously adopted. Previous to their adoption, a running discussion from the floor had brought out the strength of the interest in the subject taken by many of the organizations represented, as well as by the individual spokesmen.

> "Whereas, representatives of 21 Wood Using Industries in an initial conference at Madison, Wisconsin, on July 23d, 1920, have considered that their interest in Reforestation is definite and that any legislation enacted or proposed for enactment should have the endorsement of all Wood Using Industries, and
>
> "Whereas, there is a need of securing adequate intelligence of all phases of Reforestation through cooperation with all energies active to that end - such as Federal Government, State Government, and private-owned interests cooperating with programs already initiated, and
>
> "Whereas, there must be some centralized agency to serve for the Wood Using Industries and report to them such progress as develops from time to time, therefore be it
>
> "Resolved, That it is the sense of this conference that the Wood Using Industries declare a profound interest in Reforestation;
>
> That this conference authorize the chairman to appoint a committee whose duty shall be to formulate a definite plan for organizing a committee representing all the associations of wood users for the purpose of considering present or proposed legislation dealing with Reforestation and for formulating a program of Federal and State legislation which will represent the views and interests of the Wood Using Industries."

Prospects for Increased Forest Protection in Eastern States

Mr. Peters returned to Washington last week from a fortnight's trip during which he visited the Lake States, Pennsylvania, New Jersey, New York, and Ohio. In all these States he took up with the State forestry officials the prospects for cooperative work. His trip was made primarily because of the desire of the Secretary for specific information as to the plans of the States for enlarging their protective work, as a basis for decision as to the amount of the appropriation which Congress will be asked to make for State cooperation.

Mr. Peters found all the State Foresters keen for increasing their cooperation with the Federal Government. A total of about $1,250,000 increase of State appropriations for this purpose will be asked by the forestry departments of the States named. This is about $880,000 more than what was appropriated in the same States for last year.

In Pennsylvania, Forest Commissioner Pinchot will ask for not less than $500,000, as against $50,000 for last year. In Minnesota, State Forester Cox is going to ask for an increase from $85,000 to $330,000, while in Michigan an increase will be asked from $50,000 to $125,000.

On his way back Mr. Peters attended a meeting of between 50 and 75 members of the State forestry force of Pennsylvania. He describes the men as exceedingly enthusiastic and an exceptionally capable lot, who have had new energy injected into their organization since Mr. Pinchot and Major Stuart took hold and are responding in splendid style. Mr. Pinchot is evidently seeking opportunities to bring Forest Service men in contact with his force on all possible occasions.

More Light on a Forest Problem

The following letter continues the consideration of a worth-while subject:

San Francisco, Calif.
July 22, 1920.

The Editor,
Weekly Bulletin.

Dear Sir:

Mr. Headley's article on "Administrative Studies", in the July 5 issue, brings into this forum of discussion a subject which has engaged the attention, I think, of most administrative men since the Service came into being, although organized study is more recent. Beginnings have been made, in various units of the organization on this very thing, but the Service is so big, and the mediums of exchange of progressive ideas between Districts have been so meagre, that one is not sure always as to what his neighbor has done or is doing in a particular line of work.

Under training we can list:

1. Educational correspondence courses.

D-4 and, I believe, D-2, have done most effective work along this line. I think also D-5, and perhaps others, have at times also carried on this kind of work in modified form. Col. Greeley has recently opened up this most interesting subject in his "F, Supervision" letter of June 14, and I judge that by this fall the various ideas on it will have been correlated by Washington and we shall be able to go ahead with a definite program. To carry it out will demand the part time, at least, of one man either in the Office of Public Relation or in Operation (here) where we have a personnel officer whose knowledge of the field men would help much in the prosecution of such work. More overhead?

2. Schools.

There are legal bars to regularly organized schools for training in the Service, as such. Much can be done, however, through meetings. I believe that a concerted effort should be made to secure legal authority for school training, those attending to do so on Government time and expense, on the solid ground that such schooling is for the betterment of the administration of the National Forests. This is emphasized by the unanimous practice of nearly every big commercial organization in the country, who are looking to no other fundamental object than the strengthening of their own organization.

School training might well be established at points on the Forests. I hope we shall, one of these days, come to the establishment of a model Forest, where not only will men receive valuable training, but the public may quickly and easily be posted on Forest activities.

3. Personal contact.

Not enough attention has been given to this splendid medium for training - the most important we have now at hand. I find that the great majority of field men are willing and very anxious to learn. Every time a Supervisor tells a Ranger frankly where he has made good, or where he has fallen down, training is taking place. We must use every effort to substitute personal contact for paper advice, and this is true from the Forester right down the ranks to the guard.

I do not care to take up more space at present except to say that the other subjects listed by Mr. Headley demand much study if we ever expect to have a well rounded out, efficient force. We have a machinery to work with -- we must know it thoroughly. We must know intimately the man power that is operating it. We can never get far if this is bandied about among 30 or 40 different officers in Washington or in the Districts. It is important enough to demand the services of a personnel officer in every District. Yet such men are classed as overhead. And this seems to be at present the "mote" that the fellow with the "beam" is looking for. Accurate personnel records, a rating system, personal knowledge o men and their capabilities, are essential. District 5 has actually established the first two, and is getting the third through a personnel officer in cooperation with Supervisors. The personnel officer also worked up the rating scheme and helped establish the record. The feeling, however, has been expressed by Mr. Headley himself that such an officer is not justified. I assume he takes this stand because of the financial stringency. What does he suggest as a substitute?

Very truly yours,

PAUL G. REDINGTON,
District Forester.

Still More Overhead

Inspector Kelley calls attention to the fact that, on July 1, there were fourteen people in the overhead of the Coeur d'Alene National Forest, which now includes both the Coeur d'Alene and the old St. Joe. These fourteen people were all in the office at the time and seemed quite an imposing body. The titles and assignments of the fourteen were as follows:

Number	Title	Assignment
1	D F Inspector	Boss
1	Supervisor-Forest	Organization and Personnel
1	" "	G.S. and L work
1	Deputy Supervisor	Office Manager
1	Forest Assistant	Timber Sales
1	Logging Engineer	" "
1	Property Custodian	Property
1	Fire Assistant	Fire
6	Clerks	
14 - Total		

Major Kelley points out the small grazing, special use, recreational, and public relations work on the Forest, and questions whether the overhead is justified. It occurred to Operation that it would be interesting to make a comparison between the Coeur d'Alene and other comparable Forests. Accordingly, pertinent data was secured for the six Forests which were rated as most important in each of the six western Districts when the Forests were being studied in the spring of 1919.

In the following tabulation, two Forests are given for District 2 because, although the Pike is rated as the most important Forest, it has a small timber sale business, and comparison with the Coeur d'Alene means less than comparison between the Medicine Bow and Coeur d'Alene.

	Coeur d'Aleme	Whitman	Plumas	Coconino	Medicine Bow	Pike	Targhee
Area, M acres	1,664	1,480	1,433	1,763	511	1,256	1,370
Net receipts, M dollars,1919	83	92	91	142	53	24	52
Overhead	12	8	8	11	4	6	5
Year-long field men	15	12	7	9	9	8	10
Guards (in man years)	31	8	16.5	3.25	1.33	2	2.25
Number of year-long field men to each overhead	1.25	1.5	.88	.82	2.25	1.33	2
No. of guards &c to each overhead	3.83	2.5	3	1.11	2.5	1.66	2.45
Million ft. commercial timber	6,265	4,500	13,742	3,589	2,838	990	1,781
M.ft.timber cut, F.Y.1919	30,813	27,512	23,704	25,837	16,189	5,191	3,865
M.ft.cut per man in overhead	2,568	3,439	2,963	2,349	4,047	865	773
M.ft.cut per field men	2,054	2,293	3,386	2,871	1,799	649	387
No.of sales inc. S.22	36	54	84	85	15	81	540
Cattle grazed,M. head	..	11	12	52	11	17	35
Sheep grazed,M. head	19	97	80	91	53	26	241
Grazing permits issued	28	243	221	145	104	292	712
Free use permits issued	74	131	112	29	120	201	1,189
Claims examined	39	2	9	31	2	27	7
Special use permits issued	22	10	18	113	15	39	23

The figures bring out many interesting things. The area is remarkably even, except in District 2 where the traditional policy of small units shows its influence.

The Coconino leads the world in net receipts. In fact, the Coconino has a record that is notable in many ways. Its timber sale cut is close to the largest; it has a heavy grazing business and with so large a business in both timber and grazing it is easy to understand why the Coconino has the reputation of being a man-killer. It is interesting to note, however, that the Coconino does not seem to be particularly low in overhead. It has only one less than the Coeur d'Alene. While the Coconino has a heavy grazing business, its timber sale business is presumably very much simpler to handle.

Temporary scalers are included under Guards, etc. The large number of Guards, temporary scalers, etc., helps the Coeur d'Alene showing of number of field men and guards to each overhead. Instead of having the smallest number of guards and field men to each overhead, as might be suspected, the Coeur d'Alene actually has the largest number.

Discussion from some of the Forests or Districts concerned in this tabulation would be very interesting. For example, is the Medicine Bow showing of small overhead for a fair sized timber and grazing business to be explained by ease of handling the business, or is it due to some policy which could be made use of in other Districts? What does District 4 think about the comparison between the Targhee and such Forests as the Coeur d'Alene? Does District 4 believe that the enormous number of small sales counts for much in the total volume of business, and is the enormous grazing business on the Targhee easy to handle; or is the small overhead on that Forest attributable to other factors? Does the Coeur d'Alene believe that it is justified in having the largest overhead of any Forest in any District? The difference between the figure 12 in the tabulation and the figure 14 reported by Major Kelley is probably due to the temporary employment of clerks. The figures in the tabulation are from the 1921 allotment sheets.

Contributors Please Take Notice

A recent letter to the editors from the Forester contains the following:

"I want to tell you how much I appreciate the work you are doing on the Weekly Bulletin. I am reading the current issues with keen interest and with a growing feeling of the excellent character of the Bulletin and the splendid service it is rendering to our whole organization. It is doing much to keep the Service spirit vigorous and promote unity of thought and understanding of the other fellow's point of view among all of us. * * * * *

"I would like to make the Bulletin a means, if practicable, of getting a better understanding and closer cooperation with the National Park Service. A few items from time to time about National Park developments and current news on matters of interest to our men would be desirable. Anything that could help to develop better sympathy and cooperation in the field would be worth while."

The editors are treasuring a note dated July 29, from Colonel Graves, which read:

"I want to congratulate you and your staff on the character of the Weekly Bulletin. It is full of interest and life."

It might be added that Secretary Meredith has given the Bulletin some flattering commendation, as very much worth while and in his judgment a valuable enterprise of the Forest Service.

But an antidote against becoming too much puffed up with pride is at hand in the form of a letter recently received from a member of the Washington Office who has been discussing the Bulletin with various field officers, several of whom comment upon "the excessive volume", and the inclusion of material of little general value. It is asserted that matters of interest to some particular locality are included which might better be left out. Some Supervisors have stated that if the distribution of the Bulletin to the field is not mandatory they would desire only a file copy. Apparently these Supervisors regard the Bulletin as "just one more circular to be avoided if possible". It is said that "the bulletin must take on a different form before we can hope to popularize it".

While some District officers have expressed themselves to the effect that the Bulletin is "a fine thing", it is suggested that such views are in the nature of generalities, and that from the lack of evidence of attention to some of the subjects which have been discussed "it might be assumed that the interest in the Bulletin is often that of receiving it, skimming over it, and filing it".

If the Bulletin looks better in the Washington Office than it does in the field, may it not be suggested that there is a remedy which can best be applied by the field forces? That remedy is to contribute to the Bulletin, along the lines that the field men want. The Bulletin is intended to be a mouthpiece for the Service as a whole, not simply for the Washington Office. But to function as a mouthpiece, it requires voices back of it. In short, why not come across?

Fire Slogans and Automobilists

The Goodrich Travel and Transport Bureau, maintained by the Goodrich Rubber Company of Akron, Ohio, which is going to place on its road maps suitable warnings against causing forest fires, has requested that all Forest Service road bulletins be furnished to its local representatives.

Another Bubble Bursted

About two years ago the Supervisor of the Inyo Forest, together with the District officials in San Francisco, decided that the method of securing timber for fuel purposes at one of the towns near this Forest was decidedly inefficient and resulted in unnecessarily high costs to the consumers. There were too many "wood butchers" and no reserve supply of fuel was held in the town for emergencies. The Forest officers, therefore, conceived the idea of selling a large block of fuel wood to one man sufficiently financed to enable him to put it in a woodyard and therefore automatically to eliminate competition and the high prices which had existed previously. Following this, the plan was to offer no more timber for sale until the area was cut out. The area included 2,000 acres. The sale expired on July 1, 1920, and the purchaser has cut a little over 20 per cent of the area. The scheme failed on account of the delinquency of the purchaser and "because the local people apparently would prefer to purchase their wood fuel in the open market". This is a case where the people did not appreciate the efforts of the Forest officers to remedy a bad situation.

"Kill De Umpire"

Some time ago one of the Districts wrote the Forester suggesting the use of a colored card, Form 621, on which to record five-year permits instead of using the usual white card for annual permits. The idea seemed reasonable and so it was put up to each District Forester for his recommendation, District 7 being left out of the matter,since it has no five-year permits. On the final analysis of the reports, the vote stood three for and three against. Somebody had to umpire the affair, so the Branch of Grazing decided that, since under the rules of parliamentary procedure a "tie vote" is described as a "lost vote", there would be no colored 621 cards.

- Will C. Barnes.

More Food for Thought

Dear Mr. Editor.

I always enjoy the Bulletin. Many a time I have come near breaking in. I note in the issue of July 5 from the pen of our own Mr. Headley the splendid article (Administrative Studies)
Under the caption Personnel three lines above the signature page 6 will be found these four words.

BEAUTIFICATION OF RANGER STATIONS

I wish Mr. Headley could see my Rangers house. He would have written the word COMPLETION, then Beautification.

Last year the Service started to construct a house for my use, had to do it could not rent a place for love or money. I have a wife and at the last count four kiddos hence the need of living quarters.

You should see that place, (started is right) no comb boards for the roof, no lumber to properly enclose the foundation, no front porch, backporch not screened, bathroom but no bath tub, no linoleum on kitchen, pantry or bathroom floors, baby gets slivers in his tummy, shrubbery consists of a luxuriant growth of salt grass, no fence to inclose yard, or divert the heavy dog traffic from the corners of the house, no barn or shelter for my horses. Built corral for my horses from personal funds. In order that I might get the use of the sewer I had to provide from personal funds the necessary toilet, sink, and hot water boiler. Cost $55.85

My place looks like a chinaman had died there with the leprosy and every one was afraid to come near enough to remove the corpse or touch a match to the house.

Beautification is desirable, completion is a necessity.

I needed linoleum terribly, they sent me a most excellent kitchen range for which I am duly thankful, but every time I operate on Bobbie's Tummy and remove a sliver I think of how much Linoleum could have been purchased with the cost of the stove.

Please Mr. Inspector hurry. Bobby is wearing a tin chest or rather tummy protector and Ted is getting big enough to act as traffic cop for the dogs, but his duties are strenuous and will increase soon as there is a mess of new puppies in our vicinity.

All of which proves that Mr. Headley has hitter square.

- H.H.S. Inyo.

Whip Up!

Have we anything that is worth advertising? The Bulletin comments upon the Secretary's plan for "Selling the Department", and goes on to say that the main criticism of the committee visiting the Forest Service was that the Service is not doing enough to help the farmer in handling his woodlands. This is acknowledged and the excuse offered is inadequate funds. If the farmers knew about this, wouldn't they help provide funds through Congressional appropriation?

The Forest Service is just emerging from its shell and learning about itself. Simultaneously the public is beginning to know something about us. For years the only publicity we got was criticism from some obstructionist whose corns had been trampled upon in his effort to secure something at the expense of his neighbor and to which he was not entitled. The Forest Service, through its policy of silence, strengthened the suspicion of truth of the criticism. Through the advancement made in our publicity program the confidence of the public is rapidly being gained and active support secured.

Among the things the public is learning is the make-up of the National Forests. As a result of this, you can't keep people out of the Forests. The new movement to the mountains from all sections of the country must be attributed to a number of causes, but chief among them is the knowledge the public has acquired of their attractions. The stampede is on and if we fail to provide for the movement, meet the demand that is present, and make available for the visitors the recreation grounds they are determined to use, we shall find the recreationists running the Forests rather than the Forest Service running the recreation business. The Ten Thousand Lakes of Minnesota Association was criticised last year for over-advertising the State. It had more visitors than could adequately be cared for. The reply was "That's what we set out to do; next year you fellows will know what to provide for". Would we ever provide recreation facilities unless we were impressed with the fact that visitors were coming in hordes? Apparently some of us would not.

Foolish inquiries are still received from would-be farmers for Forest homesteads at altitudes ranging from 1,500 to 2,000 feet, close to a railroad. That doesn't mean we have over-advertised the Forests or advertised something we haven't got." On the contrary, that and ridiculous inquiries about summer homes would indicate we have not more than half advertised.

The recreation problem is one in which the public must lead and liberally support. The reason we haven't made greater progress in recreation development is lack of demand, and if the public knows we need funds we can surely depend upon its support to secure them through Congress. But we need first of all a genuine demand. That's here. Why not get organized to meet it?

On the San Isabel Forest, where the work of preparation is being concentrated this year and where the demand is keenest, the Government, State, Counties and citizens will expend $167,000 this year in making the Forest accessible and usable. The Service is expending $36,000 on roads; the balance is cooperation. The San Isabel Public Recretation Association has promised $5,000 for public improvements and made its first deposit to the cooperative fund. The president advises that when that $5,000 is spent another will be available. The Spanish Peaks Mountain Playground Association voted at its last meeting to raise $18,000 for recreation improvements within the Forest. The town of La Veta has tendered to the Government a deed of reconveyance to a section of land purchased by the town for park purposes in order that it may be fitted into the general scheme of development for the Forest. The Goodrich Tire corporation is preparing a special map guide of the Forest which it will distribute. A Universal Company representative has just finished a tour of the Forest during which motion and still pictures were taken, and the Missouri Pacific R.R. Co. followed with a movie outfit to get the Forest for the purpose of advertising the San Isabel and incidentally telling people of the Mississippi Valley how to get there.

The San Isabel Public Recreation Association is so interested in getting a completed correct plan for recreation improvement of the Forest that it is paying the salary and expenses of a Landscape Engineer, working under the direction of our Recreation Engineer, and two Associations are employing guards to protect the Forest, which the communities consider their very own.

Eighty-five newspapers near the San Isabel are jointly responsible for the interest which the public is taking in making the Forest accessible and usable through having featured its recreational resources.

This looks as though we are going to have to make preparations to keep abreast of the tide. If any one must ride the saw don't let him drag his feet.

- C.J.Stahl.

Recent Articles Prepared and Approved for Publication

How the French Turpentine System Looks to an American	By I.W.Eldredge	In book on naval stores
Careful Piling as a Means of Preventing Deterioration in Lumber in Storage	R.K.Helphenstine, Jr.	Hardwood Record
Selling the National Forests	Herbert A.Smith	Proceedings of the Associated Advertising Clubs of the World
A Study of Windfall Loss of Western Yellow Pine in Selection Cuttings Fifteen to Thirty Years Old.	H. H. Weidman	Journal of Forestry.
Timber Depletion and the Farm	W. B. Greeley	Agricultural Press
The Progressive & Compartment Systems of Kiln-Drying: Their Respective Yields of Usefulness; and Their Relative Efficiencies.	H. D. Tiemann	Trade journals
Lightwood, Cut-Over Lands and the Naval Stores Industry	L. F. Hawley	Naval Stores
Angora Possibilities in Western Oregon	W. R. Chapline	Angora Journal

Quantity of Wood Treated and Preservatives Used in the United States in 1919	R.K.Helphenstine, Jr.	Proceedings of American Wood Preservers' Association.
Factors Controlling Distribution of Forest Types	G. A. Pearson	Ecology.
Lumber Supplies in the Middle West	O. M. Butler	Lumber Journals

District 2 - Rocky Mountain District

Mr. J. Kittredge, Jr., of the Washington Office of Forest Investigations, visited the Denver Office recently en route for the Fremont Experiment Station, on an investigative trip with Mr. Bates.

People in the vicinity of Silverton and Lake City, Colorado, are expected to urge the addition of about 50,000 acres to the Durango National Forest and of about 100,000 acres to the Uncompahgre. These two tracts comprise an excepted area lying between the Durango, Uncompahgre, Rio Grande and Cochetopa National Forests, which was omitted from the original withdrawals largely because of mining activities in the region. At the present time mining is inactive and the region is overrun with sheep, resulting in over-grazing and damage to roads and trails. From a National Forest standpoint the timber resources have a protective value only, but since the exceptions result in illogical Forest boundaries it will be the desire of the District Office to see the additions made, provided local people evince the expected interest and urge the matter upon their representatives in Congress.

At Ouray, Colorado, a rustic booth is being erected by the Forest Service in cooperation with the local recreation association, to contain maps, photographs and other data concerning the possible trips into the mountains surrounding the town. The booth is constructed of slabs and is about 7 feet square with one side open; and it is planned to place a shelf around three sides on which maps of the various trips will be displayed. On the wall above each map will be a series of photographs and descriptive material relating to the trips displayed on the maps below. The booth will also be used for dispensing printed pamphlets for the benefit of travelers.

Personnel Ratings in District 2.

At the Supervisors' meeting in Denver, during February, it was the expressed desire of the supervisors present that they be given ratings in a manner similar to the ratings given rangers in that District. This desire was complied with and the qualifications and attributes of each supervisor in the District have been carefully analyzed by the District Foresters and Assistant District Foresters.

The list of qualities on which the analysis and ratings were made is given below:

Judgment
Reasoning ability, accuracy in conclusions, ability to profit by experience.
Initiative
Alertness, imagination, originality, independence in thinking.
Integrity
Truthfulness, honesty, sincerity, frankness.
Organizing ability
Systematizing, classifying according to functions, planning and delegating.
Health
Bodily vigor, good sight, hearing, etc., included.
Perserverance
Industry, ambition, concentration.
Aggressiveness
Energy, courage, domination by will.

Open-mindedness
Reasonableness, teachableness, openness to new ideas.
Cooperativeness
Unselfishness, kindness, cheerfulness, tact, loyalty.
Control of Emotions
Freedom from outbursts of anger or touchiness.
Refinement
Courtesy, manners, general culture.
Appearance
Well-groomed appearance, good carriage, pleasing facial expression, voice, etc.
Sense of Humor
(Including perspective.)

In addition to the above qualifications, a rating on technical standing was added covering education and experience, in order to give each man the benefit of his knowledge of the technique of his professional work.

District Forester Peck made no general announcement of ratings, and indicated that he did not care to discuss the results of the ratings by correspondence; but said that he or one of his assistants would be glad to discuss with each man his rating and the analysis of his work and qualifications on which the rating was based.

District 3 - Southwestern District

"Mr. Jenson from the Smithsonian Institute who has been excavating a few miles south of Taos has uncovered some sixteen rooms of an old Pueblo which is supposed to have been destroyed about nine hundred years ago.

- The Carson Pine Cone.

Government Ford Mileage Rate Again Proves Inadequate.
Albuquerque Morning Journal:-
"Aldo Leopold was fined \$15.00 on the charge of passing a street car which was disgorging passengers."

The Manzano now boasts a woman lookout. Mrs. Whiteside has been employed as lookout on Mt. Sedgwick. She has lived many years in that region, knows the country and the people, has fought many a forest fire, and is fully capable of recruiting and taking charge of a crew of fire-fighters.

Total 1921 allotments for this District show that the average expenditures per day will be \$1630. (Based on 365 days) The average Supervisor has charge of the expenditures of \$100 per day. (Roads money not included in either case) The receipts for 1920 average \$2400 per day for the District or \$172 per day for each Forest

"It has been found that if all wires on a fence are safely grounded, the loss from lightning striking the fence and killing cattle may be avoided. Of course these ground wires should be as close together as common sense dictates. Where iron posts are used entirely in a fence, lightning does not run the wires and stock losses do not occur." (Ranger Rodgers)

- Coronado Bulletin.

Ranger Nichols and former Deputy Supervisor Maxwell, who are old heads at the fire fighting game, rendered valuable assistance in the recent Coconino and Tusayan fires in taking charge of crews on some of the larger fires. Due to timely showers, it is now believed that the fire danger on the Coconino and Tusayan is about over.

Fifty lightning fires reported on the Coconino in one day seems to be about the record for new fires in one day on any forest in the Southwest. This season is considered by old timers as the most difficult from a fire standpoint of any since 1904. There are to date no general rains and there is likely to be a repetition of the large fires of a few days ago on these Northern Arizona Forests.

"A recent inspection made of the timber on Beyers Run, in the vicinity of Chlorida, shows that a number of trees bear old markings at a point where a troop of cavalry was ambushed by the Indians, in the early 80s. These marks are mainly in the shape of large crosses hewn into the wood. Whether these marks indicate the location of graves or where soldiers were killed is unknown." - Datil Bulletin.

That the recreational use work is about one lap ahead of the demand is shown by the following information in the Tucson Star of June 20, 1920, which reports that of 40 lots laid out at the Soldier Camp recreational area on the Coronado National Forest, 31 have been applied for, on the Upper Sabino Canyon Group - 22 lots were laid out and 10 were taken, and in Lower Sabino Canyon - 12 lots were laid out and 3 taken.

There were cut from the Forests of District 3 during the fiscal year 1920 in commercial sales 69,784 M feet of saw timber, 44, 116 cords of wood, 53,751 posts, 1,000 pieces of lagging, 1,019 stulls, 9,303 standard gauge ties and 19,943 narrow gauge ties, 1,352,476 linear feet of poles and 1,149 Christmas trees. The cut of all products reduced to M feet was 87,195 M feet.

The cut under S-22 sales was 347 M feet saw timber, 138 cords of wood, 3,765 poles, 71,315 posts, 177,080 linear feet (mostly poles below 6" in diameter) 450 stays, 12,000 shakes and 386 house logs. All products reduced to M feet equalled 1,281 M feet. The above data is interesting in that it gives a good idea as to what classes of products the National Forests in this District should produce in order to meet local demands.

We know that the timber and vegetation on the National Forests exert a favorable influence in water shed protection; it is difficult to translate the value of this influence into dollars and cents. Mr. Bates of Dist. 2 at the Forester's meeting held at Denver this Spring, states that the crops irrigated with water from the Pike N. F. are valued at $10,000,000 annually. One-half of this amount, $5,000,000 represents the value of the crop due to irrigation. The influence of the Forest in providing the uniform water supply is estimated at 1/4 the crop value attributed to the use of water, or $1,250,000. This then represents the value of the Pike N.F. to the farming region. The value of the Pike N.F. per acre is figured as follows: Recreational value, 5¢ per acre (Mr. Waugh's bulletin) Value of water for municipal and irrigation purposes 85¢ per acre, total value due to the Forest per acre per year is 90¢ per acre.

Page the Sunday Supplement Reporter, for here's the latest dope from the "wilds" of New Mexico that should make the most jaded reader sit up and observe. Ranger Pincetl, who is apparently living up to his reputation as a trouble locater, is responsible for the following wires exchanged between Supervisor Andrews and Superintendent Stacher of the Navajos at Crown Point; but let the telegrams tell the story:

Samuel Stacher, Indian Agent, Crown Point, New Mexico;

"Forest Ranger Cuba reports Navajos gathering in large numbers off the reservation. Herders deserting stock on range and assembling in settlements. General fear of disturbances exists. Can you give any information on the matter?" Forest Supervisor.

Frank Andrews, Forest Supervisor, Santa Fe, New Mexico;

"Medicine Men have advised the Navajo Indians world will end next Saturday, for them to flee to mountains, this is the cause of movement, they will return to their homes after that day, no serious trouble anticipated anywhere." *-Stacher, Superintendent.

A party of automobile tourists were enjoying a picnic dinner across the road from the Cliffs Store at the Greenlaw Mill. They had a camp fire where they made their coffee, and later all went into the store to buy some soda pop, etc., leaving their fire smoking a little. While in the store they spied the "PUT OUT YOUR CAMP FIRE" sign, and directly several women and a man or two got buckets, filled them at the horse trough nearby, and literally drowned their fire.

District 4 - Intermountain District

Mr. Martin has returned from a 33-day trip through Nevada, Idaho, and Wyoming, greatly regretting that it was necessary to curtail the trip to some extent owing to the necessity for Mr. Bonner (who had accompanied him) to return to Washington at an early date. They found that, on most of the road projects, labor was scarce and high and on all but a few of the projects the work was progressing much more slowly than was anticipated. Mr. Martin stated that numerous pictures were taken by Mr. Shipp and it is expected that, during the winter, many good photographs of Forest conditions along the roads that were traversed will be received. Mr. Bonner and Mr. Shipp left the party at Monida, Montana, for Missoula, where Mr. Shipp intends to continue his photographic work.

Forest Inspector Clinton G. Smith, of the Western Division of the Branch of Forest Management, is in this District giving particular attention to plans of management. He intends also to devote some time to timbersale inspection and studies of the influence of grazing upon forest management.

Mr. Locke has returned from the Teton where, in company with Mr. Nelson, Inspector of Grazing, he has been looking over the summer elk range on Buffalo and Gros Ventre watersheds. They also examined the areas on Cliff and Willow Creeks now utilized by sheep from the Wyoming Forest. Mr. Locke states that there have been several showers throughout the section, the country is still moist, and the forage is in particularly good condition.

The results of the law enforcement work this season show what District 4 can do when it gets enthusiastic. The Salmon is the latest Forest to establish a 100% record on its first fire of the season. John Mende, a sheep herder, built a fire to protect his flock from bears. The fire spread before Mende was aware of it, but he almost had it under control when Ranger Huestis arrived on the scene. Mende was brought to Salmon by Ranger Huestis on July 17 where he plead guilty before the Probate Judge who fine him $10, plus the costs of court, amounting to $3.70, and in addition required him to pay to the Forest Service all expenses incident to the suppression of the fire including the Ranger's automobile mileage, a total of $32.60. The Supervisor's letter reporting the incident was accompanied by the bank draft for the full amount, thus establishing a record for promptness and efficiency in handling fire trespasses.

A petition signed by numerous persons living principally in the State of Wyoming, has been received praying for the addition of quite a large area lying immediately north of the Wasatch and Ashley National Forests and located in both Utah and Wyoming. Copies of this petition, it is understood, have been forwarded to the Wyoming delegation in Congress.

A copy of a poster issued by the Fremont County Rod & Gun Clug of St. Anthony, Idaho, has been received in this office. They offer a reward of $25 to any person, except Game Wardens, for the proof and conviction of anyone violating the game and fish laws of Idaho within Fremont County. The Clark County Fish & Game Association, at Dubois, Idaho, have been publishing a series of articles in the local paper, written by different members of the Association, bringing before the public the objects of the Association and the necessity for action in protecting the local fish and game supply.

Today

Today is what you have. It is also what you are. And again, Today is what you do. And if you haven't anything, and aren't anybody, and do nothing--- why, then, for you there is no Today.

For Today is music. Today is art. Today is literature. Today is joy. Today is work. Today is play. Today is LIFE.

Yesterday is no problem--for it is past. Tomorrow is no problem-- for it is not here. Today is supremacy. Today is the world. Today is--Opportunity.

Crowd in upon it, then. Today--take hold upon its faintest chance. Spread your smiles--Today. Be game--Today. Be glad and great--Today.

Today is the day --your day.

Today is Time and Change doing its job. Are you a vital part of the play? Today you may start out all anew. Today you may hope to use what you learned a day ago. The center of your entire life may revolve about--TODAY.

But, above all things, do not fear--Today. And let all worry slide. All things that do not count--let them go, too. Work and help, and live--Today. For this Today will never dawn again!

District 5--California District

Secretary of Agriculture Meredith, with Assistant-to-the Secretary Harrison, visited the District Office on July 8. He was to have taken a four-days' trip over the Eldorado, Tahoe, Plumas, and Lassen Forests by motor, but the extended sessions of the Democratic Convention prevented this, to the mutual regret of the visitors and the District officials. With Secretary Meredith the interests of the Department and its component bureaus are paramount, and through his "personal selling" of the Department during the last few months, its work has been brought most intimately before hundreds of thousands of people. The Secretary is outspoken on the salary question and the necessity for more adequate salaries for the faithful workers of the Department is the one thing he has particularly stressed in his speeches and his representations to Congress. We are indeed fortunate in having such a man as our "Big Boss".

Forester W. B. Greeley spent July 14 and 15 in San Francisco, where he outlined his ideas regarding the forest program before the California State Board of Forestry and the lumbermen. Colonel Greeley gave a short talk to members of the District Office, making a particular point of his belief that, while employees of the Service had always done a great deal for the organization, he doubted if the organization had in turn gone as far as it could in considering employees. He expressed himself, however, as optimistic in regard to the future.

"On my return from a two weeks' trip in the East" writes District Forester Reddington, "I was greatly delighted to learn how well the fire situation had been handled up to date. True, the season has been a favorable one, but reports clearly indicate that the men are on the job to put the fires out and it is confidently expected that this spirit will carry us through a record year. The number of Law Enforcement cases is gratifyingly large. The airplane patrol is working well in most localities and, while costing money and taking the time of our men, is an asset of large value in the fire game, particularly as a means of public education. We should see to it that our participation in this program is an active and constructive one.

Over $27,000 cooperative money is available from our fire cooperation and the tangible interest of timber owners and operators in adequate fire protection is becoming more evident every day. A top-notch record this year is what we are after."

California to the Front

It has been said that while California has conditions suitable to the production of the best livestock in the world, she actually produces a very low grade of stock marketed under an obsolete system. We know these statements are true, yet it is encouraging to note the progress made in the last few years toward better stock, and that California now proposes a remedy in class of stock actually marketed.

It is learned on reliable authority that the Globe Milling Company of Los Angeles has increased the feeding experiment they started last year at Los Angeles to a capacity of 15,000 cattle.

Co-incident with this is the rumor that the Western Meat Company has leased its yards in San Francisco to a well-known feeder who will, hereafter, conduct a general stockyards business.

One independent packer informed the writer that feeding operations at his plant last year netted him $15,000, which was the cost of equipment necessary to carry on his feeding business.

When the high price of feed is taken into consideration and the fact that all these operations are located in centers of population to which all feed must be shipped, it is difficult to reconcile the statement of producers that feeding the products of their farms to livestock is unprofitable.

Whether or not the increase in feeding operations means the advent of our eastern system of marketing remains to be seen. Whether in the form of stock yards or what not the public generally and some stockmen in particular will welcome any change which will turn the right grade and class of stock on the right market.

Our timber sale business has been booming during the past year. Our timber sale receipts for the year show a return of $386,000.00 which is almost exactly double last year's receipts. The value of the cut for the fiscal year 1921 should amount to at least $450,000.00, and large sales that are practically assured on the Shasta, Stanislaus, Plumas and Lassen Forests should bring the 1922 receipts up to about $650,000.00, to say nothing of the small sale business that is continually developing and any unforseen or remotely contingent larger sales. The mark that we should shoot at is a million dollars a year by 1925. I believe we can make it if we are able to secure sufficient allotments to enable us to employ the necessary scalers and other timber sale personnel.

The value and accuracy of the air patrol has recently been strikingly demonstrated. (1) Our lookouts reported a large fire in inaccessible country on the Klamath. Air Service observer located the fire accurately and reported it as small, thus saving men, time and money. (2) 6000 acre fire in Lassen lave-beds. Difficult country. No dirt in which to build lines, travel almost impossible and values low over much of area. Where should it be fought? Supervisor makes, in 40 minutes, an accurate airplane reconnaissance including sketch map on which disposition of 75 men is made, fight directed and lines located. (3) Fire reported on Shasta 5 P.M. by observer, 5:20 P.M. by lookout. Forest officers considered it a farmer burning a carcass, but observer reported it as a timber fire, which was later verified and fire extinguished. (4) Lassen fire reported by lookouts as in 69AL1. Observers report 5 minutes later as in 68AM4. Guard lost time and fire got away at least partly as result of incorrect lookout location. Observer's location later proved correct. This was same fire as #2 given above.

The average total period of service in the Forest Service of chief clerks now on the Forests in District 5 is 5.7 years. The average period of service of the chief clerks on their present assignments is 3.1 years. Ten of them have served an average of 1.5 years in their present jobs. Two chief clerks, Mrs. Shinn on the Sierra and Wm. Brown of the Modoc, have been at the same place 12.5 years and 8.9 years. Clerk Settles of the California holds the record number of assignments, having served during his 10.5 years on the Mono, California, Alaska, Shasta, and again California. F.C.Porter of the Shasta, leads in total length of service in the organization. Miss Greff of the Inyo, has been in the Service nearly 11 years.

On July 21 the local heads of 16 Bureaus and lines of work of the Department of Agriculture got together at a luncheon at the San Francisco Commercial Club. They decided to hold monthly luncheons hereafter on the first Wednesday of every month. The purpose is to get in closer touch with the work of the Bureaus, to consider questions which affect all Bureaus, to make suggestions for betterment in procedure, regulations and other matters when deemed advisable. The District Forester was elected chairman of the organization and H. P. Dechant was elected Secretary.

District 6 - North Pacific District

The Forest Service has been asked to cooperate in Fire Prevention Week, October 2 to 9, to be observed throughout the United States. This request came from the city fire marshal's office, and includes the request for a Forest Service float in a parade to be held in Portland October 9.

Some dissatisfaction has been expressed from time to time with the name Boulder Cave for a certain popular camp ground on the Rainier Forest, used largely by people from the Yakima Valley. The Cascadians, an organization of mountain climbers, with headquarters at Yakima, Washington, appointed a committee to consider the selection of a better name or decide on the retention of Boulder Cave. Over a hundred names were submitted in a contest, but the vote was to retain the original name. The Cascadians have applied for a special use permit for the construction of a lodge at Boulder Creek Camp Grounds.

James T. Jardine, formerly grazing inspector in the Washington office, was a very welcome caller at the District Office on July 23. He finds his job at Corvallis very interesting and predicts that it is going to keep him more than busy.

On a recent inspection trip on the west side of the Rainier Forest, Mr. Munger found Douglas fir timber which has been dead and down for 20 years being utilized for shingles. This particular use of dead Douglas fir is new to the market and might be considered as an excellent example of conservation.

Dr. Frank A. Waugh, professor of horticulture and landscape gardening at the Massachusetts Agricultural College at Amherst and collaborator of the Forest Service in recreational development, is in D-6, where he will study the needs of the Mount Hood Loop region in the way of landscaping, visit various Forests for a survey of the more important camp sites, and make other investigations which will lead eventually to the best and widest use of the recreational resources in this District.

The radio station at Eastmoreland, Portland sub-base of the airplane patrol, measures fully up to the standard, according to the report of Captain Culver of the Air Service, who inspected it July 22. This inspection trip included the forest patrol radio stations of Oregon and California. Captain Culver travels in an airship, piloted by Lieutenant Conroy.

Forest Examiner Charles W. Boyce reported recently from Eugene, where he is stationed as a liaison officer of the air patrol, that a ship returning to Eugene from Medford on its regular trip turned over when it reached Eugene. "The pilot, Cadet Andert, pancaked into the field against a 15-mile wind. He lost all of his flying speed. When the ship began to settle he gave it the gun and the motor didn't respond in time. The ship landed flat with a big bounce, breaking the landing gear, and then turned over. It will be shipped back to Sacramento for repairs. Observer Davis was in the ship."

James Willard Schultz, of Greer, Arizona, called at the Portland office July 19 on his way to Glacier National Park, to see Mr. Guthrie, whom he knew in Arizona. Mr. and Mrs. Schultz will spend several months in the Park, collecting data to be used in the history of the fur trade that he is writing. Mr. Schultz is the author of some dozen books relating to the history and legends of the Blackfeet Indians. He is an authority on the Blackfoot tribe, having lived for many years with them. Mr. Schultz has his summer home on the Apache Forest, (under a term-permit). His latest book is a story for boys, "In the Great Apache Forest", which brings in a girl fire lookout, grizzly bears, and I. W. W. incendiaries.

A carrier pigeon brought the message to Fort Rock Ranger Station, Deschutes Forest, that help was needed at a fire burning 30 miles from the station. No telephone was available and had it not been for the pigeon, the ranger who discovered the 40-acre blaze must have either left it to go for the needed help or hired a man, could he have found one willing and able to take the 30-mile trip without delay. While the pigeon was hatched in the lofts at Bend, it now recognizes Fort Rock as its home and flew straight there, with the result that men were promptly dispatched to the fire, cutting down the elapsed time by over 12 hours.

E. T. Allen, of Portland, forest economist of the Western Forestry and Conservation Association, was elected forester for the National Lumber Manufacturers' Association during the recent convention of the Association at Chicago. The lumber interests of the Northwest received further recognition at this meeting by the adoption of the program of forestry conservation and legislation drawn up by the Western Forestry and Conservation Association.

To the regret of his friends and associates, Forest Ranger Gustaf W. Hult, of the Office of Forest Management, resigned July 20. Mr. Hult did planting and planting investigation work for the Service for many years in California, on the Angeles and Santa Barbara Forests. He began work in this District November 20, 1917, after graduating at Oregon Agricultural College, and served on the Oregon, Umpqua, and Santiam Forests, as well as in the District Office. Mr. Hult's plan for the immediate future is a short vacation in Yosemite National Park, where he expects to take a large number of game pictures, possibly assisting in taking moving pictures of game. Eventually he plans to go into some form of game study, probably in the National Park Service. He has for many years been interested in game and has done considerable independent investigative work along this line.

Camp Chinidere, at Wahtum Lake, Oregon National Forest, where Boy Scouts have had their annual outings for the last five years, is now open for the season. Groups of boys leave Portland for Wahtum Lake weekly, each group remaining two weeks. The capacity of the camp is 150. The boys go to Eagle Creek by train, and then hike 15 miles to the lake. Swimming, diving, fishing, and hiking are the principal pursuits. The Sunday Oregonian of July 18 quotes Dr. Waugh as saying of such use of National Forests:-

"The work of the Boy Scouts along this line is excellent. The boy goes into the forest. He is aroused in the morning to see the sunrise. He does not rave about it, probably, but he sees it. He is made to bathe in the stream and have water fights, but he does not use exclamations of wonder. At night he hears the rustling of the fir boughs and all the mysterious conversations of the forests, but he does not gush about it. But in later years, when at his desk in the city he has troubles with his boss or other clouds pile up, then his thoughts turn back to the forest, and if he can get five days off he goes back and gains spiritual fortification."

According to recent newspaper reports, a representative of one lumber company is in favor of compulsory planting. "At a logged-off land conference held in connection with the Interstate realty convention at Spokane, T. L. Greer, chairman of the meeting, urged that the replanting of all cut-over land should be made compulsory by national legislation. Mr. Greer, who is connected with the Humbird Lumber Company, of Sandpoint, Idaho, told of the great success of this policy when carried out by his own company. 'When we consider that there are 326,000,000 acres of logged-off lands in the United States alone, and 10,000,000 in the territory which the delegates of this convention represent, we cannot help but realize that some step to improve this growing acreage must be taken! he said, "New forests must grow where old forests have grown, and at the same time the land upon which the new stand of timber is taking place must be used for grazing land. It is a great problem and my idea of the question is that the regrassing and using of this land which is not adaptable to strict cultivation, must be compelled by law.'"

Secretary of Agriculture Meredith believes that the development of the forest and hydro-electric resources of Aslaska is a practical means of increasing the supplies of newsprint available for the United States, and therefore eventually lessening the paper shortage, now so acute.

Western hemlock and spruce are the standard mechanical and sulphite pulpwoods for the United States mills in the Pacific Northwest, the hemlock being consumed in greater amounts than any other single species. Hemlock forms 60% of the merchantable stand of timber on the Tongass National Forest, Alaska.

Aside from newsprint paper, only a few grades of building and mill wrapping paper are made at the British Columbia pulp plants, but hemlock-spruce sulphite fiber is shipped to outside mills for the production of bind, manila, tissue, pure fiber, printings, and other high-grade papers requiring a strong, tough, white fiber; this same system could probably be followed with pulp plants located in Alaska.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

August 9, 1920.

"Lest We Forget"

It is sometimes necessary to dig into the past to see if what we are doing today, or are proposing to do tomorrow, represents real progress. Sometimes we find we have been traveling in a circle when we fancied we were making tremendous advances.

On July 28, 1920, a circular letter was sent all Districts and all inspectors working under the immediate direction of the Washington office, requiring the use of inspection outlines. This was signed with some misgivings, but with the hope that the instructions were so well safeguarded that there was no danger of such an outline being literally followed, our paper work increased, and our records burdened with useless lumber.

Many years ago the Forest Service adopted a very carefully worked out inspection outline. That outline was placed in the hands of a corps of keen young men. They went into the National Forests and they "did things", but in preparing their reports they took the outline too seriously. The report on a single Forest involved a literary labor comparable in length to "Jean Christophe". Believing our reports to be also comparable as literary masterpieces, imagine my surprise and chagrin upon receiving a letter, which, excepting for the enumeration of certain details no longer applicable to our work, read as follows:

"Mr. E. A. Sherman,
Missoula, Mont.

December 11, 1907.

Dear Sherman:

For some time I have felt that we are doing our inspection in too much detail. If this does not stop, inspection will cost too much and it will fall short of the best results. That this condition exists is not your fault or that of any other Chief Inspector. We have simply got into the habit of doing our inspection that way, for which the very detailed outline of instructions sent out to inspectors in the beginning is mainly responsible. Of course this was necessary at the outset.

Just how far an inspector shall go into matters upon a National Forest and just where he shall stop cannot be prescribed absolutely in advance. He has got to act under general instructions, of course, but very largely upon his own judgment on the actual needs of each case. I do not mean that the work which properly falls to an inspector should be done less thoroughly than it is being done now. But it is not necessary for the inspector to handle some of the matters which inspectors have been considering, both because they fall properly to the supervisor and because we must use every possible means to leave inspectors freer for the larger phases of their work.

* * * * * * *

To sum up, before an inspector leaves a National Forest, he must know its general condition and its important needs, and I want him to tell me clearly about them in his report. Matters that are going badly must always be reported. Failure to discuss any line of work will always be taken as the inspector's statement that it is going well. But I do not want either trivial details or general working plans. To take a specific case:-- We will assume that on a given Forest inspection so fully develops the positive unfitness of the supervisor that the advisability of substituting another man is beyond question. Under such circumstances, the essential thing for the inspector to do is to state the facts regarding the supervisor, to recommend that another man be put in charge, and to indicate what lines of work need the particular attention of the latter and why. For example, the inspector may have determined that the ranger force is of low standard and effectiveness, that improvement work has not been carried forward vigorously or under a comprehensive plan, and that timber sales, grazing, or other lines of Forest business have suffered. Whatever the troubles, it is the duty of the inspector both to indicate them and to suggest the general lines along which their improvement may be reached. But it is not his duty to make a detailed plan for the handling of each project in each branch of work conducted on the Forest. That is a bad thing to do, both because it takes the inspector's time which is needed for bigger things, and because it relieves the supervisor of the responsibility for planning his own work, which we have got to put squarely upon him.

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It would be an excellent thing for you to write strong letters to your inspectors regarding the need for avoiding all unnecessary padding of this kind. I believe the modification I have indicated in the policy and routine of inspection are urgently needed to economize in effort. But I want to say also that I am greatly pleased with the main results of inspection work in your district and in the others. I see, as I know you do, an increasing opportunity for great usefulness through the inspection work. And, except for the suggestions I have just made, I am delighted with the way you are all working the thing out.

Very sincerely yours,
GIFFORD PINCHOT,
Forester."

No, we are not traveling in a circle. We are correcting a reaction which went too far to the other extreme. That the helm swings through its complete arc as often as every thirteen years in order to keep us sailing on a fair course, should not be taken as evidence of bad seamanship upon the part of either officers or crew. In fact, I feel that our July 28, 1920, letter of instructions and the reproduction of Mr. Pinchot's letter above, prove the real stability of our policies and our organization.

In addition to the value of each in its own time and place, taken together they are an excellent warning against going to extremes in either the omission or the observation of details. The earlier letter is reproduced at this time "lest we forget".

E. A. SHERMAN.

A New Line in Forestry Education

Much well-deserved publicity has been given to the Decennial Celebration of the Forest Products Laboratory and the Reforestation Conference of the Wood-Using Industries, which were held at Madison on July 22 and 23. These were followed on July 24 by a less advertised, much smaller, and more informal meeting, which in the long run can hardly fail to be productive of important results. In a way the meeting was closely tied up with the celebration and conference which preceded it, since it had for its object the formulation of plans for training men for work in forest products who in addition to the education in engineering, physics, or chemistry necessary as a foundation for the work would also have some training in the more strictly forest end of forestry. That men with training of this sort would help the Laboratory to achieve still greater fame in the future and would assist materially in the formulation and execution of an effective national forest policy can hardly be doubted.

For some time it has become increasingly clear that research in forest products to reach its maximum efficiency requires a type of man which neither the forest schools nor the engineering schools are at present turning out. The foresters who have specialized in products work have as a rule found themselves handicapped by insufficient fundamental training in engineering and the physical sciences, while the engineers, physicists, and chemists have similarly found themselves handicapped by lack of fundamental training in the biological sciences and their practical application in forestry. The very fact that wood is an organic product makes it desirable for specialists studying its properties and uses to have some knowledge of the processes by which it is produced, and of the effect which these and the varying conditions of tree growth may have upon its structure and its properties. Similarly such specialists are better equipped for their work if they know something of the general character and extent of our forest resources, of the methods by which they are harvested and utilized, and of the relation of wood and other forest products to the economic life of the country.

The conference at Madison on July 24 was called to discuss both the need for men with a broader training than is now available and ways and means of providing such training. It was attended by representatives of eight forest schools, including two on the Pacific Coast, and by a goodly representation of engineers and chemists from the Madison Laboratory, University of Wisconsin, and the National Lumber Manufacturers' Association. After a free and informal discussion lasting practically the entire morning, the conference found itself in virtual agreement as to the real need for men with a combined training in engineering or physics or chemistry and in forestry. It was pointed out a number of times that five or six years of collegiate and post-graduate work would undoubtedly be necessary to turn out thoroughly trained men of the type desired, and that in four years no school could hope to do more than give a man an educational foundation which would enable him to start out merely as an "apprentice", who would have to acquire the further training needed for advancement by experience and self-study. It was felt, however, that there is a demand for both types of men and that some plan should be worked out by which present courses may be expanded to train them.

The Madison conference wisely avoided any detailed discussion of the particular courses which should be offered for the training of the two types of forest or wood utilization engineers, and instead contented itself with approving the general principle, pointing out difficulties that would have to be solved, and asking the writer to organize a committee to go into the matter more deeply with a view to presenting definite recommendations to a general conference which has been proposed for next winter to discuss the entire problem of forest education. It is more than probable that members of the field force of the Forest Service have been thinking somewhat along these lines and could offer valuable suggestions both as to the type of instruction advisable and other points which would be of value to the committee. Any suggestions of this sort will be most gratefully received.

S. T. DANA.

"Industrial Research Translates Knowledge Into Dollars"

This, the slogan of the Decennial Celebration of the United States Forest Products Laboratory at Madison, Wis., on July 22 and 23, was interpreted in various ways by the officials and experts discussing the different phases of the work of the Laboratory. H. F. Weiss, Chairman of the opening session, in his introductory remarks, said: "I believe it is particularly necessary for the Government and the industries to cooperate more wholeheartedly, if our country is to play a prominent part in the commerce of the world. In the Forest Products Laboratory the Government has established an institution which is doing much direct good for all of the wood-using industries, and indirectly for all of us, because all of us use wood in some form or other".

"Legislative Measures for Forest Conservation"

Mr. Weiss then introduced the first speaker of the morning, Governor Philipp of the State of Wisconsin, who addressed the meeting on this subject. "Nature would have been a great conservator of forests if she had permitted trees to grow square rather than round", declared Governor Philipp during his reminiscences of the wasteful methods of the earlier days of the lumber industry.

"It is unfortunate for the country and unfortunate for the timber supply of the country that there was not some control, even back in the sixties and seventies when the great timber supply was here, that there was not some supervision that compelled the use of what we at that time regarded as the class of timber that had no commercial value for purposes to which it could be put and save the high-grade timber that we need so much today.

"This State has had some experience in reforesting. We have made an honest attempt to replant some of our cut-over timberlands. Now, I have this to say about it. As a State policy it is not a possible thing today.

"The cost of the land, the cost of planting, the cost of the care that the plant needs, the taxes that the State loses provided it reserves this land for forestry purposes, make the price, if we compute it up to the time that the trees might become merchantable, so high as to make it an impracticable thing. Nor is it, in my judgment, a State duty. It is a national duty. The National Government should recognize it promptly and take hold of the future supply in an efficient manner. The timber supply of the future, the one which is produced, should be the supply of the entire country, and whatever it costs should be the expenditure of all of the people".

Director C. P. Winslow, in speaking of the purposes and work of the laboratory, said in part: "The Forest Products Laboratory is called an institution of industrial research. Its object is to acquire, disseminate, and apply useful knowledge of the properties, uses, and methods of utilization of all forest products. This is a broad field of almost unlimited scope; the surface has, as yet, been but partially scratched.

"Consider for a moment the extent to which forest products enter into the comforts, conveniences, and pleasures of many, if not all of a vast multitude of people. These accustomed comforts and privileges of existence are dependent upon a wide variety of industries, dependent to greater or less degree upon forest products. These supply useful and necessary occupation to some million or more people. They include 20 per cent of the 276,000 manufacturing plants in the country.

"The future of these varied and tremendous industries is dependent upon a supply of raw material; their ultimate and greatest success dependent upon the wise selection and most efficient handling of this raw material. This means that authentic knowledge of the properties of the material and how to utilize them most efficiently is, in the long run, essential to their continuation on a sound economic basis.

"It has been said that research is primarily a matter of men 'who work upon the frontiers of knowledge, conquering new domains'. Research may be done individually, separately, disconnectedly, and progress of some sort will undoubtedly result. But to organize, correlate, coordinate, and direct such effort must, in the long run, bring greater progress in less time, with less expense and greater saving.

"This has been the guiding thought in the development of the Forest Products Laboratory -- the systematic acquiring of useful knowledge that may be transformed into the power that builds up American industries. With the exception of a similar and much smaller institution in Canada, it is the only institution of its sort in existence. However, the importance of such work is becoming generally and, in fact, internationally recognized. The Australian Government now has under way the development of a forest products laboratory and similar developments are under way by the British Government in India, and, to a very limited extent, in South Africa. Former members of our staff have, within the year, left to take up such work in these countries. Norway also has similar plans under development although they have not, as yet, progressed as far as in Australia and India.

"Prior to 1917, the organization of the Forest Products Laboratory comprised a personnel of approximately 80, expanding during the next eighteen months to 500 and at present includes slightly less than half that number. The aggregate expenditures over the entire ten-year period are in the neighborhood of two million dollars, or a yearly average of about $200,000. This is but an insignificant sum when the breadth of the field and magnitude of the problems are considered. The results of much of the work cannot, of course, be quoted in dollars and cents. Certain other results, however, enable the use of such a yard measure and a few of them will, I am sure, serve to convince that organized industrial research is a paying proposition.

"For example: The building and construction trade uses annually approximately 5-1/2 billion feet for structural purposes where strength is important. This material is worth roughly $200,000,000. Investigations at the Forest Products Laboratory on the mechanical properties of American woods have given knowledge permitting a 20-per cent increase in allowable working stresses in structural timbers. This means a possible saving of $40,000,000 annually; if results are actually applied to only 10 per cent of such material, the annual saving will equa $4,000,000.

"The claim for loss and damage to commodities in shipment actually paid by the railroads amounts to $100,000,000 annually. Proper nailing developed and reco mended by the Forest Products Laboratory, and adopted by the National Association of Box Manufacturers and through them by many companies and shippers, if consistently estimated to save but one per cent of this loss, means a total saving of $1,000,000 a year.

"Work on water-resistant glues and plywood for airplanes carried on at the Laboratory during the war emergency alone saved the War Department $6,000,000 in their procurement of such material during a twelve-months' period.

"Investigations carried on at the Laboratory during the past year regarding the use of hull fiber and second-cut cotton linters for pulp and paper have made available 200,000 tons for this purpose and have resulted in the establishment of large plants with potential production of 300 tons per day and an annual sales value of $15,000,000.

"Improved methods of turpentining developed by the Forest Service have resulted in increased yields and less injury to timber, with net savings aggregating $4,000,000 per year.

"These few examples alone show combined annual increase in production and decrease in waste aggregating $30,000,000.

"The lumber and wood-using industries represent some of the greatest and most important manufacturing and industrial developments of the country. Of the nation's industries, they rank second in invested capital, first in labor employed, and second in annual value of products.

"The Forest Products Laboratory is the only institution of organized research engaged upon the problems of these industries, and those problems yet untouched and unexplored are many and of far-reaching importance. What, for example, of the possibilities which may result from the development of permanently durable and water-proof glues or adhesives and their application to the use of material too small or of too poor a grade for other service; what of their application to forest economics through the increased value thus given to small second-growth material? What of the sulphite-pulp liquor problem involving the possibility of utilizing the 55 per cent of the wood fed into the pulp digesters and now lost in the waste sulphite liquors? What of the problems of packing, boxing, and crating of various materials and commodities for shipment and transportation when conservative estimates show a possible theoretical annual saving to the country of 300 million dollars? What of the need for improvement in the method of treatment and handling of piling and dock timbers in water infested with marine borers which destroy the piling within 18 months after placement and cause an annual replacement aggregating millions of dollars in the various harbors of the Nation? What of the waning supply of hardwoods and the need for authentic knowledge of the properties of South American and other foreign woods as compared to those of our own country for which they may ultimately be needed as substitutes"?

"Forests and National Prosperity"

"The Forest Products Laboratory at Madison, which now completes its first decade, stands as a visible and practical expression of the thought of two great leaders in the field of forest conservation, Theodore Roosevelt and Gifford Pinchot", said Col. Greeley in his address to the audience at the banquet.

"Aside from the will to work which is the foremost quality of any strong nation, its economic and social progress depends in the long run upon the foresight and efficiency with which its natural resources are used".

The Forester showed by statistics the extensive use to which wood has been put in this country and the urgent need of a yet greater supply - the need on the farm, in building houses, in our paper industry, on our railroads, in boxing and crating our commodities, and in our factories.

He spoke also of the diminishing supply of wood. Half of the remaining timber of continental United States, Colonel Greeley says, is in the three States bordering the Pacific Ocean, and the true index of timber depletion is not the quantity that is left but its availability.

"The area of idle or largely idle land is being increased by from three to four million acres annually as the cutting and burning of forests continue. The enormous area of forest land in the United States not required for any other economic use, estimated at four hundred sixty-three million acres, would provide an ample supply of wood if it were kept productive. Depletion has resulted, not from using our timber resources, but from failure to use our timber-growing land. The answer to the forestry problem of the United States is, therefore, not to use less wood but to grow more, to put our idle acres of burned and logged-off timberland to work growing trees. This is not inherently a difficult thing to accomplish. It is not the Utopian dream of a technical enthusiast. Three-fourts of it lies in preventing forest fires, but it does require also an aggressive national policy of reforestation. It requires concerted action by the National and State Governments to do the things which must be done by public agencies. It requires a clear definition of public and private responsibilities as to timber-growing land, with an equitable showing of the cost. There is no phase of our whole problem of an assured and perpetual supply of timber that can not be met by simple and obvious measures, once the constructive effort and capacity for organized cooperation of the American people are put behind them."

"Some Problems of the Pulp and Paper Industry"

"If the Forest Products Laboratory is to be of the greatest possible assistance to the pulp and paper industry, closer cooperation must exist with the mills, for the final test of any laboratory trial must take place in the mill", remarked D. C. Everest, Secretary & General Manager, Marathon Paper Mills Company, in discussing several problems of the pulp and paper industry at the Friday morning session. "Too often information vital to the successful prosecution of a problem is withheld or full and hearty cooperation is lacking. If the mills refuse to give the Laboratory their full confidence and at the same time maintain a critical and unsympathetic attitude, but little real progress can be made on those problems in which the industry is vitally interested. If, however, they look upon the Laboratory as a part of their own organization and treat it as such, correcting its mistakes and commending its successes, the greater portion of any research problem is already solved.

In conclusion, Mr. Everest said: "We need this Laboratory. Private enterprise can not buy such facilities and conditions. You who have been privileged to see and know what is being done here must realize that if we are to solve our technical problems relating to timber, its care, perpetuation, and proper use, we must back this Laboratory to the limit, either by inducing Congress to provide for it adequately or by individual subscription if necessary."

"America's Place in Industrial Research"

"America leads the procession of industrial research", declared H. E. Howe, Chairman, Research Extension Division, National Research Council. The speaker summed up briefly the many fields in which America has advanced through industrial research and experiment, carried on by associations, corporations, and Government effort. The time has come, however, he affirmed, when Federal and State Governments should cooperate with private forest owners and lumber industries in taking active steps looking toward reforestation and conservation in order that the United States may maintain its leading place in the lumber world.

"Some Problems of the Lumber Industry"

W. A. Gilchrist, representing the National Lumber Manufacturers' Association, spoke from the viewpoint of the lumberman. He offered a plea for a more sympathetic understanding of the earnest efforts of the lumbermen to protect the forests and conserve wastes.

"The lumber business", he said, "is no different from any other commercial industry, is an economic problem, and failure confronts it if pursued in any other manner.

"The task that confronts us is one of mere engineering - to establish rules covering the creation of suitable mechanism. Who can better accomplish this than an engineer cooperating with the woodsmen?

"Certain activities of this wonderful institution, the Forest Products Laboratory, are attracting the earnest attention of members of our industry. Being engaged in the commercial side of the lumber business, I hear comments of the most favorable nature, that I fear do not come to the ears of those sincere men engaged in directing this activity".

A Kind Word from an Inspector

On my inspection of the Ketchum-Stanley Road, I was greatly impressed with the excellent work which has been done by Supervisor Benedict of the Sawtooth Forest in connection with the installation of information and direction signs along the road. Signs have been installed at every stream crossing and branch road, together with others which point out features of interest along the route. Without doubt this is the best sign-posted piece of road which I saw during my entire trip over approximately 5,000 miles of road in Districts 3, 4, and 1, during the past season. Supervisor Benedict advised me that there have now been installed about 900 signs throughout the Forest, and although the matter had required considerable personal effort the expense had not been large. I feel that Mr. Benedict is to be highly commended for his efforts in this direction and I think that the Districts have not gone far enough in encouraging the Supervisors to more energetic work in this matter.

F. E. BONNER.

Why is a District Ranger?

There is a controversy raging in the Forest Service over the combination of qualifications that should be sought for in selecting district rangers. No, this is not a controversy which makes a lot of noise and gets a lot of attention like the use of automobiles by rangers or light burning in California and Seattle. This is one of those silent struggles of conflicting ideas which often count for more than the noisy battles. On this particular clash of ideas depends the ultimate organization of National Forest administration, and perhaps also a large measure of the ultimate usefulness of the Forest Service.

District 1 is lined up on one side of the contention, and District 6 on the other. District 1 holds that the district ranger should be a technically trained forester and should have as much authority and responsibility as the present supervisor has, or more. The Montana idea is that this highly trained man will make his own silvicultural studies, negotiate his own sales, do his own marking, and in fact come pretty close to being the whole show. It is contended that this man will thus,for the first time, have a real chance to practice the profession for which he has been trained and that he will find his career so interesting and satisfying that he will be willing to live in the woods or in the small towns in which a man would have to reside if he were really to do the work of a ranger district. If he or his wife will not endure the isolation and discomforts of living in the woods or in small towns, District 1 believes it will do no harm to change men every few years. A thoroughly trained man will be able to do so much more that the lack of stability of personnel will not be serious; stability of personnel often means stagnation of personnel.

There is, of course, a good deal of ordinary work about a ranger district which is not very interesting to most men after they have done it a few times. While there is a difference of opinion in the District, the tendency is to believe that laborers and local help should be employed for the ordinary work. In fact, it is perhaps a fair statement that the whole idea works toward splitting up each existing Forest into four or five small Forests with a central office somewhere to look after paper work and give expert advice.

District 6, on the other hand, holds to the view that district rangers should come from among the people living on and near the forests - that, in fact, the present type of ranger is the best type. The men of the rainy district believe that the technical functions should be performed much as they are now, by technically trained men covering several ranger districts. They feel certain that the technical forester will not be content to live in the woods, and that if he will, hes wife won't. They argue that the Forest Service cannot hope to win the confidence of forest communities and give and receive help from them if there is going to be a new ranger every five or six years. They believe that stability of personnel is indispensable to the attainment of some of our recognized objectives.

It will be interesting to see which side of this controversy wins, and whether the non-technically trained rangers and the technical men and supervisors take a part in the discussion, or whether the decision is made by the men who sit in the seats of administrative authority.

If I have not reported accurately the opinions of either District, or if some one wants to submit a minority report, the editor has authorized me to state that the columns of the Bulletin are open.

ROY HEADLEY.

From the Man on the Ground

The following letter to Assistant Forester Barnes refers to Mr. Barnes' article, "Lightening the Load", which appeared in the July 5 issue of the Weekly Bulletin. Mr. Rodgers is a ranger on the Coronado Forest.

> "I was much interested in your discussion of the shortage of man power, in the bulletin recently, and am quite in accord with you. Here on this division we had once, four rangers and about one tenth of the work to do, or rather we did not know we had the work to do. Later, as you will remember, the district was cut into two units with two rangers, and later, wisely and well, made into one district with a ranger and a helper. During many years the helpers were new men, good stuff most of them, but of little real assistance, but nevertheless men who must have instruction and assistance in the practice and handling of forest work. With the exception of one man, all that were sent here to begin are in the Service now and considered good men. We used to have the June 11 classification work to do, and on this district it was so great that it took for years more than 75 per cent of our time.
>
> With the ending of that work and the passing to patent of the claims, we are free to take up other lines of work which were necessarily neglected. The first big job was the grazing and we stepped to it gladly and to the discomfort of many of the permittees and for which the Forest Service has from these men been roundly abused, but we did the work fairly well and bully in some cases and the irritation shown by those permittees is disappearing. With conditions changed in this way, we have been able to get over the ground literally and figuratively in better shape, and today the work is in better shape than it has ever been since this was made a forest in 1906. I mean by that, we are really getting the work into such shape that it will not push us much longer, but that we will soon be able to push it, which has always been the goal sought.
>
> But that very condition brings with it antagonism from certain permittees which one not acquainted with the workings might think was due to lack of administration, but which is really due to administration as it should be. It has been for years past so that one thought he could not get out of the office, with the reports asked for piled for the sending, and now the sky is really clearing and we are free to go and stay till the work outside is accomplished. We have felt for years that we were "milling 'round" and getting nowhere, but glad to say we really were and it is such a relief.
>
> I have noticed that when we have Supervisors that supervise we make headway, but when we have Supervisors who make clerks of themselves and make paper supervision we are handicapped and worried to distraction. Bellhop, paper supervision is the worst enemy a forest ranger has, and the one thing that causes more changes in personnel than all others combined, and the rangers that do not move are fretted, discouraged, and perplexed. When a ranger gets three requests for reports to be made "special", all to be reported in three days and for which field examination is required for each case and the examinations are located at the three ends of the earth and could not be reached in three days without an air-plane, the ranger is really mussed up. Glad to say that condition has passed with us at least. Past conditions bring to mind the story of the darkey boy who was given a dollar and allowed to ride on a merry-go-round. He stayed on till his dollar was gone, then his mammy said, "Well, Rastus, you has spent your dollar, but where's you bin"? We've gone 'round many times.

You are right, we are more efficient; we do more work; we do it in less time and better than we ever did before, and with less men. We and the Service are found fault with and cursed, but Christ was cursed and found fault with, so we are cheering up mightily, and taking to the things before us with pleasure anticipated.

I did not intend getting into this strain when this letter was started. We have had a dry summer. Mrs. Rodgers leaves this week for a rest and pleasure jaunt and I will bring out old Dobbin and hike for the hills as free from worry as a ranger should be, with no home to go to and nobody there, no promise cards behind me, and just looking for business. Wish you could come and see the problems we have to work out and help with your good advice.

Very sincerely yours,

Robt. A. Rodgers."

Progress of the Fire Season

The July 31 reports from the Districts show a total of $103,000 of fire-fighting expenditures and liabilities for the month of July. Of this amount, $56,000 was used in District 1 where conditions have become serious and the expenditures for the first ten days in August are estimated at $80,000. District 7 has no fire season at this time of year, and District 2 has a total expenditure of only $332.

Estimated total needs for the first ten days in August amount to $97,000, which means that by the time this Bulletin ~~and~~ goes to press $200,000 of our $250,000 fire fund will be obligated. It is obvious that unless conditions turn quickly for the better we shall be forced to incur a deficit.

The unfortunate fact that the fire-fighting appropriation is at the end of the Agricultural Bill and not a part of the General Expense appropriation makes necessary a method of financing fire fighting much more awkward than usual. Allotments to Districts have been made, and when these allotments are exhausted the General Expense funds of the District will have to be disbursed in payment of fire bills. When a deficiency appropriation is secured it is expected that the General Expense money will be restored; but we will continue to hope that no deficit will occur.

What is Your Time Worth?

The average salary of rangers in District 2 this year, including bonus, is $1498. The estimated cost of travel per man is $142. The estimated cost of forage per man is $170. The estimated cost for maintenance of headquarters buildings per man is $63. The total cost per man is $1873.

An analysis of the work of a number of representative district rangers indicates that the average of effective field days per year per man does not exceed 100. This figure may surprise you some, but if you will check over your diary for the past year you will probably find that your record of effective field days is under rather than over the one hundred figure (field days do not include time going for mail and supplies or days spent about the station).

This 100 days represents the productive part of your work. A few days may be spent at the station in conference with users, but most of the remaining time is overhead to the field work. In other words, the number of field days you put in is pretty much the measure of what you are earning for the Forest Service. If you get in 100 days a year, each one of them costs Uncle Sam $18.73, because the unit cost of work is the total cost of your services divided by the units of work accomplished and all these units of work must be done in the field. This makes the field days come pretty high. An hour lost and a consequent loss in accomplishment in units of work means $2 on the wrong side of the ledger, and a day spent during the field season fixing up a corral or doing some other job that might be left for a time when effective field work cannot be done makes the maintenance cost come pretty high when figured in this way. In my experience there are quite a lot of such days.

As a means of increasing efficiency, I suggest the plan of each man checking over his diary for a year past and figuring what his field days have cost Uncle Sam when figured in this way. I believe a great many men would be surprised at the result and that through such an analysis there might be found a means to help meet our shortage of manpower.

FRED MORRELL.

Speaking of Literature

Reading is my greatest pleasure and an interesting new book is always an event in my life; but it is mighty seldom that I get so excited about a book as to stop my friends on the street just to tell them about it, which I have been doing ever since I first read "Tales from the X-Bar Horse Camp", by Will C. Barnes. And I want to tell everybody in the Forest Service about it. Here is a book written by one of us about things we are all directly interested in, full of interest and information, tragedy and comedy, wholesome philosophy and good sense.

It is often said that Browning's "My Last Duchess" contains a whole novel in fifty lines. In the eleven pages of one of these tales, "The Trinidad Kid", there is the whole spirit, flavor, and history of the far Southwest. The cattle outfits on the wide plains, the swift Rio Grande with the mystery of Mexico beyond, the humorous but heroic friendship of the cowboys, the tenuous but never-forgotten ties with the distant home, the instant readiness of eye and brain and courage in every emergency, and the loyalty and cooperation that won the desert country and made of it a land of plenty to pour a flooding stream of hides and meat and wool into the Nation's larder; it is all there and with it a philosophy of life so fine and wholesome that when you finish the story you have a better opinion of humanity, a better opinion of the world as a place in which to live. This little story is written in the simplest and most unaffected way imaginable. There is no labored attempt at style; there is no weighing of words. The man speaks out frankly what is in him in vigorous, straightforward language. I consider this not only a true and vivid reproduction of the life of the cattle country, but a masterpiece of story-telling.

The excellent qualities in "The Trinidad Kid" are present throughout the book. From every page the reader gets a vivid impression of truth and reality. Mr. Barnes is no disciple of anybody's; he rides his own horse and digs in with his own spurs; but he has several traits in common with O. Henry: He gives us the Southwest exactly as it looks to his own keen, observing eye and not as we expect it or think it ought to be. In another respect he is like O. Henry: The desert, the sagebrush and alkali, the waterhole, the fords, the mountain forests and the rocky passes -- all the familiar "nature" of the West -- are pictured with fidelity and charm, but it is not these things that he is really concerned with. Life is his subject and he fills his pages to overflowing with it -- a wholesome, healthy, vigorous life.

Such a book comes appropriately from a Forest Service man. The Service has absorbed, though perhaps under somewhat new forms, much of the spirit and tradition of the Southwest, and not a little of its romance. The people and the places the book deals with are all essentially within the boundaries of Forest Service experience; and the spirit that breathes through every story and every situation is the spirit that has carried the Service triumphantly over many a rocky and difficult pass.

This book has the same effect as the steaming cup of black coffee from the cook-wagon. It puts new life into a man. And we draw the cinches tight, leap into the saddle, and ride through our work and over our difficulties with a firm hand, a clear head, and a light heart, to the tune of "Way Down Yonder on the Rio Grande".

L. C. EVERARD.

Washington Notes

S. T. Dana has just returned from the Forest Products Laboratory at Madison, where he has been assisting in classifying the Laboratory force in accordance with the recommendations of the Congressional Commission on Reclassification of Salaries as a basis for Forest Service appropriation estimates for the fiscal year 1921. Dana reports the job to have been more difficult than appears on the surface, but believes that it was finally accomplished with a reasonable dggree of satisfaction to all concerned. He is particularly enthusiastic over the success of the Decennial Celebration and the Reforestation Conference of the Wood-Using industries, and is inclined to agree with Bolling Arthur Johnson's suggestion that the Laboratory should celebrate its decennial every year!

H. S. Betts, in Charge of Forest Products, is paying a flying visit to the Forest Products Laboratory at Madison.

Mr. Bonner of the Branch of Engineering has just returned from an extended trip of inspection of the road work under way in Districts 1, 3 and 4. On the trip 5,000 miles were negotiated in "flivers" willed to us by the War Department. Mr. Bonner states that excellent progress will be made this year on the big road construction program in spite of the widespread labor shortage and the "HCL" which has road work in the same grasp that the "ultimate consumer" is suffering from.

Mr. Norcross has just left for the West to look over the roads which Mr. Bonner missed. Mr. Norcross will be out about 2 months and devote most of his time to Colorado, Utah and California.

Forest Service exhibits have been prepared for seven Department of Agriculture circuits of thirty-seven fairs, besides four separate fairs. C. A. Lindstrom and F. C. Crass of the Washington Office and F. A. Gardner of District 7 will be in the field conducting one of the circuits, from August 16 to November 30.

District 1 -- Northern District

Take Nujol with your Meals

While inspecting the fire warehouse at Missoula, Mr. Bradeen attacked the problem of finding a rust preventative for cooking and eating utensils. Before Mr. Bradeen's experiments, a heavy oil was tried which made it necessary to wash the utensils before using. After experimenting with a number of products, liquid petroleum was adopted. This product is put on thin with a cloth; it is tasteless and odorless and food can be prepared in a pan coated with this preparation without first washing. Being tasteless, odorless, and harmless, the very thin coating is absorbed by the food. This liquid petroleum is purchased in five-gallon lots. It is the same thing as liquid paraffine, and is known to the trade as "Nujol". Purchased in bulk and not under the trade name it is inexpensive. The use of this preparation might be of value to the other Districts. Full information may be obtained from District 1.

A. H. COUSINS.

District 2 - Rocky Mountain District

J. W. Nelson, Inspector of Grazing, from the Washington Office, spent a few days in the District. Mr. Nelson was enroute from District 4 to Washington and investigated some grazing complaints on the Shoshone Forest prior to his arrival in Denver.

During a recent trip on the Shoshone, the District Forester attended Secretaries Daniels and Payne through the Shoshone from the east entrance to the Yellowstone Park to Cody. The Secretaries had been touring the Yellowstone Park. Secretary Payne's attention was called to the camping places prepared by the Forest Service along the North Fork road, and the policy of the Service in keeping the right-of-way in attractive condition for the benefit of tourists visiting the Park was also explained to him. The east entrance is becoming very popular, and a constant stream of automobile camping parties enters the Park over the North Fork road, as well as four or more twelve-passenger Transportation Company cars each way every day. The cabin with shower baths and running water at the Wapita campgrounds is especially popular with automobile tourists, and almost any day five or six cars will be found in the grove, with the family washing hung on the line.

Secretary Payne was much concerned about safety on the North Fork road, and his visit will probably result in the inauguration of the block system on that portion of the road through the Yellowstone Canon below the dam. He seemed strongly opposed to the commercializing of the National Parks, especially to the damming of the Yellowstone River.

Assistant District Forester Fred Morrell left the evening of August 1 for Missoula, having received a wire that the fire situation in District 1 was considered serious. In response to District 1's request, he also took with him Mr. Buckner of the Office of Accounts.

District 3 - Southwestern District

Forest Inspector Smith of the Washington office left last night for District 2 after spending about a month in District 3, looking into the timber sales situation on the Coconino, Tusayan and Santa Fe National Forests.

$4,632.64 has been received in settlement of the Vail and Ashburn trespass case (cattle) on the Coronado National Forest. This trespass started in 1916 and was closed July 23, 1920, and is one of the largest payments received in the District for trespass.

The Capper resolution report, prepared by the Forest Service in response to a resolution by Senator Capper of Kansas, is proving of immense benefit to the enlarged forestry program proposed by the Forester, in putting the facts before the public. The facts, as brought out by this report, are being given wide publicity and are being favorably commented on by publications having a large and influential following. The Country Gentleman of last week carried an editorial favoring the practice of forestry on lands suited and the Saturday Evening Post carried an article with illustrations also on the same subject. These are well worth reading.

A shipment of 3,000 lbs. of wireless equipment was today received from the army. This is sufficient to install four stations. Before the final installation on Forests, Mr. Slonaker will experiment with the telephones between Albuquerque and the Manzano and possibly between Santa Fe and the Pecos River.

"A recent caller inquired whether he could hold the 'lumber right' if he homesteaded 640 acres on the San Augustine Plains. When the character of the country was explained to him, he asked if there was any water in the 'river', and, "how about the trees'"? (Datil Bulletin.)

The large number of fires in northern Arizona, especially on the Coconino, has shown the need of additional equipment to take care of emergencies. During several of the largest fires there was an actual shortage of tools, although all suitable tools in Williams and Flagstaff had been purchased. Accordingly, supplies had to be shipped from Albuquerque where we also bought about all the hardware stores had in stock. Such a large number of tools is needed only very occasionally. To take care of these emergencies, it is planned to start a storehouse at Flagstaff to store fire and camp equipment for 200 men. This equipment will be available for fire use on any of the Arizona Forests. Later on, if funds permit, a second storehouse will be established at Albuquerque.

During the recent fire emergency the transportation system on the Coconino also was defective in that not enough motor equipment could be secured. This has now been pretty well remedied by the loan of two Fords from the Bureau of Public Roads and the purchase of one Reo and one Dodge. The Tusayan has also been authorized to purchase a Dodge truck if it is needed.

When purchasing unofficially you pay from one pocket labeled H.C.L., but when purchasing officially you fish into every pocket, first, to see that you used the individual piece of money from the proper pocket. As far as I have been able to count, this District has some twelve or fifteen pockets labeled as follows: G.E., G.A., L.C., Imp., G.R., Planting, Prod., M.P.C.V., S.&E., R.I., S.I., and even one pocket named for the "Great American" T.R. (J.F.M.)

District 4 - Intermountain District

The higher range at the end of July remains in excellent condition. Local showers have visited much of the Manti Forest and greatly benefited the range. The west side of the Forest is in much better condition on the whole than is the range east of the main divide. All classes of stock are doing well so far this season. Many of the sheep herds have been held on the lambing range until as late as July 15, which should materially help their summer assignments.

Losses among cattle from larkspur have been somewhat severe during the early part of July. In most cases the losses were due principally to low larkspur. In Upper Joe's Valley it is reported that more than thirty head of cattle died from larkspur poisoning within fifteen days.

A large shipment of trout fry is expected to reach the Manti Forest between July 30 and August 3. Messrs. Luther and Lawrence Tuttle of Manti have promised to take six cans of trout fry to Ferron Reservoir for planting in that lake. Employees of the coal companies at Clear Creek and Hiawatha have agreed to stand the expense of planting all the fish furnished by the State Game Commission for Huntington Creek and its tributaries.

Mr. John H. Seely, familiarly known as "Uncle John Seely", suffered a paralytic stroke while at Fishlake on July 31, death following some time later. Mr. Seely, in addition to being one of our largest grazing permittees, had acquired a world-wide reputation as a breeder of pure-bred Rambouillet sheep, short-horn cattle, as well as of Percheron horses and other pure-bred stock. He was a very successful business man and stock raiser, honest and upright in all his dealings, a man who knew the range as well as he knew the livestock business. In his death, Sanpete County loses one of its foremost citizens and the State of Utah loses its largest breeder of pure-bred stock. Mr. Seely leaves a large family, some of whom, it is hoped, will carry on the pure-bred livestock business established by their father. -------Manti News Letter.

On July 8 and 9, Ranger Shaw and crew packed material for observation house to the top of Twin Peak. The last 500 feet it had to be taken on man-back, as the trail is too "cliffy" to build a pack trail except at heavy expense. On the 11th and 12th, Laing, Shaw, and Eddy erected the building. While not much to look at, it will be a great comfort to the lookout in protecting him from the sun and wind.

District 5 - California District

The District Forester has just returned from a week's trip on the Sierra where he went to meet the Sierra Club on its journey through the back country. 230 people, besides 30 odd packers, cooks, etc., in one month hiked nearly 200 miles over as rough and scenic a region as can be found in the United States. Each member is limited to one duffel bag, which must weigh not more than 30 pounds. Anything else must be carried on the hiker's back. The job of feeding such an outfit three times a day is a stupendous one, but was mightily well handled. Only once was the pack outfit held up, but grub was available and the only inconvenience caused was by the absence of sleeping bags for a large number of the outfit, giving many a chance to test out the bedless theory. Some of the hardier members made ascents of some of the high peaks and a small number, including W. L. Huber, formerly District Engineer, got on the top of Mt. Halckel. This is said to be the first ascent. Ranger Price was with the club a good deal and has decided to become a member.

Largely through the activity of Ranger Sharpe on the San Isabel Forest, a number of forest users living in the vicinity of Cotton Creek have formed an association known as the Cotton Creek Wood Users' Association, which has for its purpose the construction of a timber road into a body of timber from which members of the association will secure free use material and make small sales for their own use. This association has been formally recognized by the Forest Service in the same manner as livestock associations, and it has been agreed that permits for this particular body of timber will be issued only to members of the association doing their share of work on the road, or to new members who are certified by the secretary of the association as having contributed their proper share. The privileges will, of course, not be transferable. Encouraged by the possibilities as to free use and small sales, the association now has in mind extending its scope to cover another tract of timber nearby which will be made accessible by the road, to be taken out in somewhat larger sales, but chiefly for the use of the members of the association.

(Requisition from an Amorous Ranger) Please send me one 16-inch osculating fan.

Ranger Frank Robinson of the Stanislaus reports the new public Stanislaus County Campground as finished and now open to the public. A number of improvements have been erected on the area, also a fine rustic bridge. A large campground sign and a number of attractive metal enamel direction signs have been placed and in addition the grounds have been cleaned and the site presents an excellent appearance. This camp is located on the Big Oak Flat Road near the Tuolomne Ranger Station and will be much in demand by auto parties motoring to the Yosemite.

The District Forester in company with Supervisor Benedict and Rangers Barker and Pine, visited the public camp grounds just opened at Huntington Lake on the Sierra. About 100 tables have been built, latrines constructed, garbage pits located. A workmanlike job has been done. Although the new road on the north side of the lake has not been fully completed, autos can get to the camp ground and the first day saw many take advantage of the conveniences. Supervisor Benedict is of the opinion that it will be difficult for the Service with its limited funds to keep up this kind of development, with the tremendous demand that is already on us.

"Jim, Jim, a traveling gent,
Dropped a match and on he went,
A fire broke loose and raised the Deuce,
And a berth waits Jim in the Calaboose."
-- (Targhee Terrapin)

District 6 - North Pacific District

Colonel Greeley arrived in Portland July 26, after a 2-week trip which took him into Districts 2, 4, and 6, and included a visit to Madison. He spent July 27 in Portland, lunching with a group of lumbermen at the Chamber of Commerce and meeting members of the Forest Service and their families informally at the home of Mr. and Mrs. Munger. He addressed the West Coast Lumbermen's Association at Tacoma on July 28. On the morning of the 29th, accompanied by District Forester George H. Cecil and Forest Examiner John D. Guthrie, he sailed from Seattle for Alaska, to investigate wood pulp possibilities on the Tongass and to obtain first-hand knowledge of water-power possibilities, permanent improvements, and other needs and resources of the Alaskan Forest.

A touring party of twenty-eight members, traveling under the auspices of the Massachusetts Forestry Association, spent July 23-26 in Portland and vicinity. This is the third year that this Association has sponsored a National Parks and Forest tour extending from coast to coast. While in Portland the party made the Columbia River Highway trip to Horsetail Falls and visited the Eastern and Western Sawmill, where they saw large Douglas fir logs made into lumber with great rapidity. One six-foot log occasioned considerable comment by members of the party. A section of the party made a short trip to Nehalem Junction and spent most of a day at the Columbia Timber Company's logging operation, traveling 25 miles by logging railroad and getting a close-up of logging on a large scale. The high-lead yarding and the loading of 80-foot logs on the logging trucks were of special interest. The Company logs about 300 M. feet a day and puts the logs in the Columbia River, where they are rafted to the mill at Linnton, a suburb of Portland. The Company avoids serious fires by burning its slashing regularly at safe times, and then seeding the land with grass seed. Harris A. Reynolds, secretary of the Massachusetts Forestry Association, and C. C. Heyl, tour manager, were with the party, which left Portland for Crater National Forest and Crater Lake National Park July 26. Forest officers have been cooperating with the party all along their way.

More than sixty Y.M.C.A. boys, with ten leaders, are camping at Spirit Lake, Columbia Forest, Washington, two and one-half miles north of Mount St. Helens, on a site leased by the Y.M.C.A. under special-use permit. This is the fifteenth summer the Y.M.C.A. has sponsored this camp. Its government is entirely in the hands of the boys. Its activities are promoted by the Boys' Work secretary of the Portland Association, assisted by college men representing the Universities of California, Oregon, and Washington, and Reed College of Portland.

A 750-gallon water tank mounted on a 2-ton auto truck now forms part of the Oregon Forest's fire equipment. The truck was loaned by Multnomah County to patrol along the Columbia River Highway, between Crown and Mitchell Points, on the northern boundary of the Oregon Forest.

W. H. Gibbons, Forest Examiner in charge of Products, joined the inter-regional Committee of the National Lumber Manufacturers' Association on the occasion of its meeting in Seattle, and accompanied it on a two-week trip of inspection among the logging and milling operations of Oregon and Washington, noting the character of timber and considering the best products to make from the various stands. According to local information, the National Lumber Manufacturers' Association will consider recommending to its members the character of material they should produce and discussing with them the practicability of having it manufactured at or near their own mills. The Inter-Regional Committee expects to carry on research that will be of advantage to lumber manufacturers throughout the country.

District 7 - Eastern District

Deputy Supervisor Currier of the White Mountain National Forest, with Fontaine, District Ranger Beales, and Guards Milton and Marston, are erecting a 100-foot cable suspension bridge across the Swift River on the Bartlett-Passaconway trail, at a point about 11 miles from Conway, New Hampshire. The bridge will make the trail available during highwater, which practically cut off from foot travel the southern section of the Forest from the north during the spring. The men are constructing log and stone abutments and hope to complete the bridge by the middle of August. In connection with the bridge work they are swamping and improving the road leading from Conway to Passaconway, in the town of Albany. This is considered the biggest piece of road work on the Forest.

On July 23, Supervisor Fritz accompanied Assistant Commissioner Leach of the U. S. Bureau of Fisheries, M. L. Bartlett, Fish and Game Commissioner of New Hampshire, and A. H. Dinsmore, Superintendent of the U. S. Fish Hatchery at St. Johnsbury, Vermont, on a trip into the Kilkenny District and around York Pond for the purpose of examining the waters of that district as a possible location for a hatchery. It is expected that the officials will report favorably on the location and should a hatchery be located there in the next year or two, York Pond will be closed to fishing. The project will require the construction of a steel bridge over the Upper Ammonoosuc River. The road into the Pond will be over an old railroad bed constructed by timberman. This section is considered the "wildest" part of the Forest.

Most of the men in the Service would be interested in meeting Jack A. Groenewalk, who is Fire Guard on Carter Dome in the White Mountain National Forest. He hails from Cape Town, South Africa, and is a forestry student at Cornell University. He has some real interesting stories to tell, one of which is that he never saw a wooden house until he arrived in New York, and he is twenty-one years old. He stated that stone and brick are used in South Africa and that all poles for telephone wires are made of steel or iron. Jack dislikes snakes and manages to see every one of them crossing his trail, for down in Africa they are deadly and only a short time ago he received a letter telling that his father was in a hospital recovering from a poisonous snake bite. Jack smiles at the wildness of some of the Appalachian Mountain Club trails, especially when he meets some of the feminine trampers. He totes a gun.

That the chestnut blight is gradually spreading southward is borne out by word which has just been received to the effect that during the past month it has been discovered in Stokes, Surry, Yadkin, Wilkes, Ashe, Alexander, Watauga and Avery counties in North Carolina. It is believed that the infection is about three years old, which would indicate that we may expect to find that the blight has spread even south of the above-mentioned counties. While it is not thought that the findings will cause any material change in timber management plans for the forests in North Carolina, still they are grave enough to cause some anxiety, especially since heretofore it has been the belief that it would be several years before the blight got so far south.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

August 16, 1920.

(Editor's Note) In the judgment of the editors, the address given by the Forester at Madison on July 23 is of such importance and value for the information of the members of the Service, with regard to the way that the new policy of forestry for the country is taking concrete form, that it is proposed to reproduce practically the entire address in the Weekly Bulletin, in three installments. The first is given below.

OUR FORESTRY PROGRAM - I

Address by Colonel Greeley at the Conference on Reforestation held at Madison, Wisconsin, July 23, 1920.

I am not prepared to make a set speech, and from my standpoint it is desirable that this conference should be of an informal character. What I want to get at is the facts. We want a clearing house of ideas.

It has recently been my duty in the United States Forest Service to make a somewhat hurried report to the United States Senate covering the whole question of timber depletion in the United States and the various questions related to that. I have taken advantage of the request for this report to couple with it a plain statement of the steps which in our judgment should be taken. I think we have had enough discussion of general principles. I think that whatever disagreement we may personally feel in regard to particular figures, as to particular states or regions, we are all convinced of the fundamental fact that something definite and tangible must be done to restore the timber supply of the United States.

I think we all recognize that the big objective of this effort must be to get growth on forest land that is not in demand for other uses than the production of timber. Starting from that basis, it seems to me that our forestry program in the first place must fit our existing forms of government; it must fit our existing and habitual ways of doing things; it must fit the recognized fields of jurisdiction of the different public agencies who should participate and of the private individual. We cannot nationalize all of the forest land in the country. At the same time, the public has a very large and important place in any program of reforestation; the public has, I think, very definite responsibilities. There are certain things that the public only can do.

It is impossible to bring the forest fire hazard under control without public action because you can never control forest fires without a vigorous exercise of the police powers lodged in the public. The individual private owner or associations of private owners cannot do it because they must have behind them the strong arm of the policeman to regulate the use of fire.

The great big question of forest taxes can only be worked out through public action. Aside from its responsibilities in these and other specific phases of the question, the public has, of course, a tremendous interest at stake because in the long run the object of this movement is not so much to benefit ourselves, to benefit our immediate business interests, our interests of the next 10 or 15 years, but to benefit the country as a whole and the generations which are to follow us. It is a farsighted effort at national efficiency, looking ahead, which means that the public must take a very active share in it.

At the same time, as I see it, there is a very definite, necessary place in this program for the private forest owner and the private forest industry. I do not want to see individual initiative eliminated. I do not want to see individual initiative replaced, crushed out by governmental regulation. I want to see the enlightened timber interest of the lumber owner and the manufacturers of forest products given just as large a part in this forestry program as possible. I think at the same time that the forest owner must recognize that he has a responsibility as well as the public; that in the long run the forestry movement will increase the value of his land; that in the long run he has a responsibility not only not to permit the condition of his property to be a menace to his neighbors but not to permit the condition of his property to be a menace to the industrial welfare of his country. In recognizing any such responsibility as that he must immediately couple with it the principle that what is required of the private owner must be equitable and fair in consideration of the conditions under which he is operating.

Taking these three angles then, the federal angle, the state angle, the private angle - it is my conception that a forestry program which will be effectual, which will accomplish results, must be built up on the principle of cooperation in which all three of these elements participate.

That leads at once to one of the important points more or less fundamental as to what the relations should be between the Federal Government and the states. Very strong arguments have been advanced in favor of outright, positive federal control of the handling of forest lands. Many of those arguments in principle cannot be answered, and I do not take issue with them. The question as it appeals to me is the practical road, the tangible accomplishment. It does not seem to me wise to adopt a theory in attacking this great problem that is going to lead us through 10 or 15 years of controversy, of litigation over the constitutionality of enterprises arising from conflicting jurisdiction between the Federal Government and the states.

I feel that we will get results measured in actual terms of timber growth - and that is the only way that you can measure results - much more rapidly if we at least begin on a basis of cooperation that undertakes to give a fair recognition to the existing ways of doing things, to the American idea of handling locally the things which concern you locally.

That is just my conception; I may be wrong. I am entirely willing to be the John the Baptist in this movement - prepare the way for the one who comes after with the real gospel, if the present way is not correct. But the proposition to me is very clear that the immediate thing we must go after is some form of direct attack which is going to get everybody in line right off the bat, and which is not going to delay action, while we are deciding our constitutional questions, - the rights of private property owners versus the right of the Federal Government to step in with regulations, - and that is the spirit, the point of view, behind the recommendations which I have made.

I think that, as a necessary corollary of the principle that the Federal Government is to work with the state through the state organizations, we must recognize the right of the Federal Government to insist as a condition of its cooperation, where it deems necessary, that certain standard requirements be met by the states. That is the only way in which you can make correlation between the states effective. The only way, as I see it, in which you can make federal leadership effective, is that, as it becomes clear in dealing with this or that set of conditions that certain standard requirements must be met, those requirements be made a prerequisite of federal cooperation. The above principle has been applied in other laws.

Now, beginning with those general ideas, our legislative program in forestry as I see it, must aim at five big things.

The first of these is to bring the forest fire under control. That represents 75 or 80 per cent of the whole problem. If we could once get our forest fire losses, our forest fire hazard, under control so that it would represent but one of the ordinary business losses averaging a small per cent over any period of time, we would get timber growth on an enormous percentage of our cut-over land. We would not need to worry about anything else on an enormous part of our forest areas. This thing impresses me as so fundamental that I would be willing, if necessary, say for the next ten to twenty years, to forget everything else and concentrate all our energies upon that one thing of bringing our forest fire losses down to a basis where they can be figured on more or less as a fixed hazard or a fixed liability. That must include all classes of forest land. It must include the cut-over land, the land that has been denuded by forest fires, the land once in timber but now cut and unimproved and now being made no use of; it must include, in my conception, every class of forest land unless that land is economically in demand for some other use. I think that we must do a great deal along the line of studying the use of land, the practical classification of land to determine the types of land which in the long run we anticipate will be devoted to farm crops rather than timber growth, but the actual test which I would apply - and I would apply it as a matter of law - is that we would regard any particular tract of land as forest land, to be protected as such, until that land is actually converted to other uses. In other words, a classification of land by actual use rather than by soil examination.

Our forest protection plan must include the disposal of slash. I have become convinced that there is no half-way measure; that we have got to make as a definite plank in our forestry program the practical fireproofing of our woods as far as we can within reasonable cost limits. In saying this I do not imply that I regard any particular method of slash disposal as sufficiently well established to be called essential under all conditions. The methods will vary tremendously - they are varying tremendously under our own practice on the National Forests; but I think slash disposal must be a definite part of our scheme, within practical limits to be determined in each locality by men who know conditions in that locality. The disposal of slash must, the country over, be recognized as a part of the logging operations. These things I would accomplish under the police powers of the state, applying the principle I stated a few moments ago, the Federal Government working as a cooperator of the state, and looking to the state to carry these requirements out with the private owners.

The Fire Situation

The reports for the period ending August 10 show a total expense and liabilities of $278,000, with estimated expense for the next ten days amounting to $124,000. In other words, fire fighting to the 20th of August is expected to cost a total of $402,000. If the last ten days in August are as expensive as the middle ten days, the outlay for this purpose at the end of August will be $526,000.

Authority to incur a deficit of $275,000 has been requested from the Secretary. This is much smaller than our deficit at this time last year, but it is a bitter disappointment because we had such strong hopes of an easy season and no deficit whatever.

The total expenditures to August 10, by Districts, are as follows:

District 1	$194,000
District 2	548
District 3	11,092
District 4	6,618
District 5	39,000
District 6	27,000
District 7	---
	$278,258

Emergency patrolmen were on duty in four districts, as follows:

District 1	500 men
District 4	12 "
District 5	1 "
District 6	5 "

From the standpoint of a general knowledge of the situation and the weather maps of last month, the District 6 record is a notably good one. If Districts 5 and 6 can hold their expenditure and losses down for the remainder of the season as they have done so far they will be entitled to general congratulation.

In District 1, 1100 fire fighters were on duty on the 10th of August; 387 fires had occurred during the 10-day period, 84 per cent of which were caused from lightning. Sixty-one Class C fires were burning at the date of the report, and 21,000 acres were burned over during the 10-day period. The rains for the greater part of the dangerous portion of District 1, which were reported by the weather map for August 10, 11, and 12, were only light local showers on the 10th.

The Morrell-Reed Report and the Cost-Keeping System

The recommendation of the Morrell-Reed report regarding the cost-keeping system has not yet been covered in the answers. The trouble with the plan for dispensing with the cost-keeping record is that this is the only report which the Forester gets showing how the money has been spent by activities in the field. These eleven captions now in use were selected by Colonel Graves as representing most nearly the character and extent of information which he needed in dealing with Congress. These cost-keeping figures were never intended for administrative use. If the Washington Office or the Districts are able to make administrative uses of these figures, this will be a by-product which will put us that much to the good. The main purpose of the cost-keeping figures is to provide the Forester with equipment for presenting to the Appropriations Committee the necessary facts, and for answering their questions. I hardly think any of us are in a position to say that the Forester does not need these figures for this purpose, and I do not believe we should seriously consider asking the Forester to go into his hearings with the Committee lacking the equipment that he will get from the cost records we are now keeping. Whenever the Forester finds that he does not need these figures, we shall be guilty of maintaining useless paper work if we do not abolish our cost-keeping system at once.

ROY HEADLEY

Turn Day Into Night Says H. C. L.

Telegrams are the latest thing to exemplify H. C. L. - though not the last; for railroad and Pullman increases are already in sight, and it would take an extraordinary optimist to believe that there are not still more to come.

A new Government contract with the telegraph companies went into effect July 1. Under this contract the Government will no longer pay for words in the address and signature, and the minimum message will be 10 words instead of 20. On the average, the rate is considerably increased for day messages. Night messages, however, will average, if anything, a little lower than under the old contract. The allotment to cover telegrams for the present year is $8,000, which is a little less than actual expenditures for last year. Accounts is therefore fervently hoping that everybody in the Service will bear most carefully in mind that, when telegrams are necessary, a night message should always be used if possible, and act accordingly.

Like each one of us personally, the Service has to study small economies these days if outgo and income are to balance.

It was a District Forester who had something to say in the Bulletin recently on the subject of unnecessary use of the long distance telephone - a timely caution too, in the opinion of some of the members of the Washington Office. But telephone messages must at least be paid for by the Forest or District Office incurring the charge. With telegrams the Washington fund foots the bill. The more need for thrift.

"The Way of the Transgressor"

The Washington papers recently mentioned the final ending of one of the crudest and, at the same time, the most successful attempts ever made to swindle the public through grazing permits on a National Forest.

In 1907 application was made to the Supervisor of the Coconino Forest in Arizona for a grazing permit covering the on-and-off grazing of 600 horses. The parties making application were several ex-cowpunchers, who claimed to have formed a sort of copartnership and to have bought out some 20 or 30 range horse outfits who had left remnants of their herds after the big cleanup of the Boer War. Our regulations as to securing permits were not strict in those days, and they gradually got the permit increased until in 1909 they had a permit for 800 head. In January, 1910, this form sold their 800 horses and signed a waiver of permit to the Smith Brothers Land and Live Stock Company of Omaha, which secured renewal of the permit for 1010 horses for 1910, all on the Forest. The Smith Brothers' Company then secured a sworn statement from one of the original permittees to the effect that he believed the Smith Brothers' Company really owned in their various brands more than 9000 head of horses. They secured like statements from several other stockmen to much the same effect.

In 1911, the United States Live Stock Company, of Omaha, Nebraska, applied a grazing permit for 1000 head of horses which they said they had bought of the Smi Brothers' Company, and the permit was issued and the fees paid. There was later strong presumptive evidence that the United States Company and the Smith Brothers' Company were one and the same, one being simply a holding company for the other. Then the Supervisor began to get letters from Nebraska, Iowa, the Dakotas, and elsewhere in the middle west, forwarding copies of bills of sale from the United State Company covering a certain number of horses in certain brands "running on the range under Government permit in Coconino County, Arizona." Fifty or sixty such letters were received and in many cases the parties asked for a permit in their own name for the horses purchased; others asked how they could gather their horses, etc., for shipment.

Investigation showed that the Smith Company had been doing a wholesale business among the farmers in the middle west in selling brands for thousands of horses "range delivery in Coconino County, Arizona." Many of the purchasers resold their holding merely on the bills of sale.

Finally, about thirty of the owners came to Flagstaff, and there staged one of the biggest "wild-horse round-ups" ever made in the west. Of wild horses there were a plenty, and when these easterners announced their desire to employ numerous cow persons at a good salary, plus a per diem for saddle horses, every cow-puncher in that part of Arizona promptly quit his job and went to work for these strangers. The round-up cost between $8,000 and $10,000 and netted about 100 horses valued at not over $500. The easteners went home with fire in their eyes and the result of it all was that forty-two different men were indicted for using the mails to defraud - about the only way the law could touch them. Of these, eleven were convicted. Eight of them served time, while four have fought the case ever since. Recently, however, the United States Court of Appeals, at Omaha, affirmed the finding in the lower courts and these four must serve their terms in the federal prison. The evidence showed that the two companies were formed by a bunch of horse dealers around Omaha and that based on their bills of sale they sold between 15,000 and 20,000 head of horses which netted them more than $500,000. Their printed literature showed great herds of fine, high-grade Hambletonian and Percheron horses romping about on the forest ranges in northern Arizona, while the sellers played up the fact that they held a grazing permit from the United States Forest Service, which was submitted as evidence that the horses must be thereon the ranges. The situation caused the Washington office considerable worry for a time lest the Service be dragged into the case and we be accused of aiding and abetting the fraud through the issuance of permits for animals which did not exist. Fortunately this side of the question did not come up in the various trials, the charges all being based upo violations of the postal regulations.

WILL C. BARNES

A Ranger Makes His Choice

The following letter from a Ranger to a Supervisor comes to the Bulletin via the District Office, and is reproduced notwithstanding the fact that the writer obviously had no thought in his mind of having a communication so personal and intimate made known, even within the brotherhood of the Service. It is hoped, however, that he will not seriously object to seeing his letter in the Bulletin, in consideration of its helpfulness to us all.

> "Maybe I am a plain damn fool and maybe I am a damn fool of an idealist. My family can not conceive of anyone turning down a chance of a lifetime for a salaried position.
>
> "I have just turned down $300, or better, a month, and a half-interest in a paying business that has all chances of expansion into a very large proposition. I am turning it down simply because I believe in the Forest Service, its policy and its ideals and that I am an important, if small, cog in the machinery that is driving us toward our goal.
>
> "As a business man in a big city, I would be lost in the shuffle, whereas here I have been on the 3rd, 4th, and 5th County Liberty Loan Committees, the Red Cross, a trustee and clerk of the board of a school district that I was instrumental in having established in order that some of our local children would get an education, a branch county librarian, and have turned down, because of my work, a directorship of the local cooperative store and

a position on the Republican County Committee. I have seen an incendiary district turned into a law-abiding community where set fires are the exception and have seen the force of men drop, although we are now doing a great deal more work, from 14 men to 6 men in five years.

"My folks think I am kidding myself and that time will justify them, as old age creeps on and no chance to grow old gracefully with a fat bankroll and an established business.

"Maybe they are right, but at the present time I would rather ride around in a Ford and be of service than ride in a Pierce Arrow chasing the almighty dollar only.

"This ramble is just to let you know my decision, as you know I was sent for and went to the city to investigate the proposition. If I were out of a job or did not like my present work so well, it would have been a wonderful opportunity."

A Ranger's Views on the District 2 Study Courses

Forest Ranger E. L. Bennett, on being asked by the District Office if he would not contribute his views on the District's study courses for use in the Bulletin, tried to nominate "some of those fellows with an easy flow of ink" (names specified, but editorially suppressed for fear of untoward consequences) "as better qualified for the job", and denied having "an idea worth expressing"; but he was obviously overmodest as to his qualifications for the assignment. The proof follows, in his own words:

Creede, Colo., July 16.

> I am for the study courses all right and think they are just a beginning of what we are going to and must have in the not far distant future if we are to continue to progress at the rate we have been progressing in the past. Development along practically all lines of administration has been more rapid than those who have been steadily on the job probably realize, but it is noticeable to one who has come back to the Service after approximately two years absence.
>
> Things that were either experiments or newly adopted ideas two years ago are now accepted routine and it looks as though we are constantly reaching out for more. A higher degree of efficiency is being demanded, less lost motion is tolerated, a closer check is being kept on just what has been accomplished and the relative importance of that accomplished and that neglected is being more carefully weighed, and it is reasonable to suppose that this trend will continue until our period of speedy development will have passed and we are as nearly standardized as the character of our activities will permit.
>
> Along with this we are retarded by the fact that our entrance examinations are getting a little harder, the rate of pay on entering the Service is low and advancement is slow when we compare the Service with other lines of endeavor, and private enterprise is constantly claiming a toll of our best men. As these conditions keep us from getting the class of men that are best fitted to the job it is up to the Service to develop and educate the new men and at the same time educate the old guard who stay with the job. The study courses are the most convenient if not the best and most efficient method of doing this.
>
> In my opinion, unless radical readjustments are made that will enable the Service to enroll the sort of men qualified at the start to handle the job, the study courses will have to be developed and elaborated until they will practically amount to a school of forestry specializing on the particular problems encountered in Forest Service work. As they have been put out in the past they fitted the conditions obtaining at that time very well and I am sure that all who took study courses derived a great deal of benefit from them and the work of the Service benefited greatly.

Although I have taken only two, the Surveying and Forestry courses, and I considered the latter very elementary in its scope, I have been able to apply the knowledge I gained from the former to good advantage a great number of times and the latter, elementary though it was, enabled me to get a keener insight into some of the simpler problems of forestry and I have noticed that since taking the course I have been better able to answer questions asked by the general public about the forest and particularly about individual trees. This may appear to you to be a small matter but if you will stop and think just how many apparently simple questions have been asked you by the public you will be able to see the importance of being able to answer these simple questions. The whole Service suffers a little every time a forest officer admits that he does not know some little thing about his own job and the things under his charge.

As I have very little commercial sale work on my district the value of the course in this line is unknown to me but it is probable that I would find that the things I learned would be of as much assistance in sale work as it has been in free use and information.

There is one course that I thoroughly disapprove and that one I have not taken. I refer to the telephone course. So far as I have been able to see it has turned out a bunch of half baked telephone engineers who are unable to fix up a line and guarantee first class phone service and are also unable to teach the working of a phone box to a novice in language he can understand. Possibly this condition is not universal among those who have taken the course but it is sure my opinion of the results that have been obtained on this forest. It is my idea that it would be far more efficient to keep a small staff of real telephone engineers attached to D.O. who could go out and make a line work than it is to have a ranger, who but partially understands the problem and who spends so much time on other work that he forgets the little details of telephony, waste a lot of time, that could be better spent on something he understands, puttering with a box making experiments to see what will make the darn thing work.

As the courses are given in the winter time when the work is slack on a good part of the districts they serve to fill up time that might not be as profitably spent and in my estimation could not be more profitably spent, but with the elaboration that is inevitably coming there is going to be a time when the study is not going to be the incidental time filler that it is now and provision will have to be made for the officer to have time for intensive rather than incidental study. I do not know how many will agree with me in this but it is my idea of what will be needed regardless of whether it is adopted. There are a lot of things the field man thinks he needs that he does not get and some of them he finds he really did not need and the others he struggles along without until some object lesson impresses the fact that he really does need it on the minds of those who provide.

On second thought I do not believe this state of affairs is confined to the field man either, as I seem to remember a Forester quitting, not because his pay was not adequate but because the providers were more concerned with 6% on railroad stock and things like that than they were with providing him with money and equipment with which to carry on necessary work. I suppose the educational campaign is hampered along the same line; at any rate it is not developing as fast as the conditions warrant.

We should have this branch of the work systematized just the same as the other branches and an adequate appropriation to carry it on as a regular and important activity. With the efficiency records as a guide, the D.O. should be able to determine in what lines each man is weak, whether this man is on a district where this weakness is detrimental to his efficiency, whether his weakness should be overcome or whether the line in which he is strong is of enough importance on his particular job to make further education along that line more necessary than a strengthening of his weak point, and, with this data as a guide, to shape his education along the most desirable course.

Two years ago I submitted the suggestion that a course in botany be put out, simplified by someone who knows what the technical terms really mean and who can tell it in language that a human can understand so that the fellow who is on a district having grazing as the chief activity could learn what sort of forage he was boss over and could intelligently divide up his territory, giving each class of stock the range best fitted to them and putting on the number that a knowledge of the forage and an observation of effects of grazing dictated. So far I have not heard about any such course being adopted and I am as well off as I was when I started. The ground cover is heavy and the sheep come out looking fat, as far as I can see through the wool, and there seems to be a lot of feed on the range when they left; but the herder and owner said they did not weigh up well when taken to market, so I wonder if that range that locks better than the one B has, from which he takes fat lambs every year, is really as good; whether the type of ground cover that looks practically the same to me on both ranges, is not really greatly different, and if I am doing as well by the first owner and, consequently, by the Service as I should be doing. This is one course that I think is really a necessity.

I started out to send you a little note to excuse my tardiness in writing - please do not get the impression that all my alibis are as long as this one.

Yours,

E. L. Bennett.

What Do the Clerks Themselves Think?

The Forest Clerks' meetings held early this year by District 6, at Baker and Eugene, Oregon, and Seattle, Washington, were very enthusiastically endorsed by the clerks.

In talking over these meetings, Fiscal Agent Urbancwicz stated that, in his opinion, a detail of clerks to the District Offices would be productive of more benefit to the clerk and, therefore, to the Service than a clerks' meeting, such as the above. His idea would be to detail a clerk to the District Office upon a definite program. The clerk following this program would spend a stated amount of time in each section and take up the matters in general pertaining to the Forest upon which the clerk is employed. He could see how the Forest activities tied into the District scheme and derive considerable information and benefit.

It has always seemed to me that a clerks' meeting is the more beneficial plan, since the getting together of the clerks, the studying of each others' problems and their discussion, supplemented by information from the District officers present, get further than a clerk's trying to absorb all the District activities and relationships in offices where the interest in such clerk is more or less doubtful because the offices do not deal with the clerk but with the Supervisor.

Mr. Stockdale, In Charge of Operation in District 1, believes that clerks' meetings would accomplish more than details.

A. H. COUSINS

Still Another Bubble Bursted

The use of gas in the great war suggested to many people that gas and gas bombs could be used effectively in fighting fire. So much was said about it that Dr. Hawley, of the Madison Laboratory, was asked to study the possibility of using gas in our warfare against fire.

Dr. Hawley's article shows that we will have to lay the gas bomb idea away with that other dead one -- the brilliant idea that gas masks would be useful to fire fighters. Dr. Hawley's report follows:

Many suggestions have recently been made in regard to the possibility of extinguishing forest fires by means of gas bombs dropped from airplanes. The reasoning in this case, if there has been any real reasoning, has probably been from analogy with poison gas bombs; if one gas shell could poison and possibly kill a company of soldiers then a gas shell could be readily devised which would possibly extinguish a small forest fire. The trouble with this kind of reasoning is that fires can not be "poisoned" by a gas but can only be smothered and although one part of poison gas in one million parts of air may be sufficient to kill soldiers, yet perhaps 750,000 parts of inert gas per million parts of air might not be sufficient to smother a fire.

Let us take the suggestion as it has been made and endeavor to work out a scheme for actual practical operation. First, what gas will be used? The man with brilliant ideas subconsciously remembering an old fire extinguisher advertisement, might say, "Use some gas which will run along on the flames and put them out". It is easy to offer a much more billiant and only slightly less practical suggestion than that, "Use a gas which on being released anywhere within 20-25 miles of the fir will travel rapidly to the flames and extinguish them." However, this might do away with the use of airplanes, so we will not endeavor to develop the idea further.

The only kind of gas which will be of assistance in stopping a fire is an inert gas which will neither burn nor support combustion, such as nitrogen, which is the inert constituent of the air, or carbon dioxide which is formed when any carbonaceous material, such as coal or wood, is burned. From the standpoint of cheapness and ease in handling, carbon dioxide would probably be the most practical gas to use for this purpose, since it can be readily obtained in liquid form under moderate pressures. Suppose that an airplane carrying five hundred pounds of gas bombs containing 300 pounds of carbon dioxide spotted a small fire; suppose it succeeded in dropping the bombs exactly in the fire; assume that the fire covered an area of 700 sq. ft.; and assume that the gas liberated from the bombs did not escape outside this area and did not rise higher than 10 feet above the ground. Most of these assumptions, especially the second and fourth, would be very difficult of achievement, but will be allowed to stand in order to continue the discussion. The 300 pounds of gas would be equal to a volume of about 3,000 cu. ft. and the atmosphere around the fire would then be about 43 per cent carbon dioxide and 57 per cent ordinary air. Since air contains 21 per cent oxygen, this mixture would contain .21 x .57, which is equal to 12 per cent oxygen or still enough to support combustion. It would, therefore, be necessary to make our assumptions even more difficult of realization before the value of gas for fire extinguishing could be demonstrated, and this we are unwilling to do. It is a pity that such a simple and promising method for fire fighting must be turned down on account of a few facts, but this is the trouble with most brilliant ideas - the facts do not back them up.

L. F. HAWLEY.

Our Idea of Money to Burn

A profusely illustrated pamphlet of over 100 quarto pages of coated paper has just come in to the editor's office containing accounts of tree planting by the employes of a certain group of properties, on the fiftieth birthday of their head. In over one hundred cities trees were planted. This man will have more trees dedicated to him than Washington had headquarters. We are interested in the trees, and in many of the places it looks from the pictures as if they would be a Godsend. But the editor turns green with envy to see thousands of dollars and so much good paper and halftone work put into giving publicity to the celebration of a single birthday, while we have important manuscripts languishing in the files for want of printing funds and paper.

Windshield Stickers Help

The following letter was received by Supervisor Sherrard from Ranger Wiesendanger at Eagle Creek Station on the Columbia River Highway:

> "Last Sunday 432 automobiles on the Eagle Creek Camp Grounds were tagged with the fire sticker 'Put Out - Keep Out Forest Fires.' My supply of these stickers is exhausted and if you can supply me with more please do so. I found last Sunday by sticking these on the windshields of cars about the time campers are getting ready to leave for home that several on arriving at their car and finding the sticker on the windshield returned to their camp and cleaned up and put out their fire."

--From "The Forest Patrolman"
Western Forestry & Conservation Association

District 2 - Rocky Mountain District

Who Does The Work?

Which Forest and which ranger district has the most work is a subject which is under continuous discussion. When we get together with a group of Supervisors, statements like the following are frequently made:

"I know that the Medicine Bow has more timber sale work to handle than we do, but timber sale work is easy to handle. If that was all we had to do, it would be a cinch, but when it comes to handling over three hundred thousand sheep on a Forest of more than a million acres, and other work of that kind, it takes men and money to get away with the job".

"I know the Rio Grande has a lot of sheep grazing, but they don't have any sales work and that's what takes the time and the men. We handle some sheep on the Medicine Bow, but if that was all the business we had, we could cut down our cost of administration a whole lot."

We have never had any way to measure the amount of work involved in handling sheep over against the amount involved in handling timber sales, etc. During the past year Mr. Keplinger has given a good deal of thought to this subject and has worked out a scheme for comparison. Briefly, it is this:

The 1917 unit cost figures were taken as a measure of the cost of handling various lines of work. For example, if the cost figures for the District showed that we spent as much money in 1917 in handling one thousand sheep as selling five hundred thousand feet of timber, it is assumed that that comparison can be applied to determine the relative amount of work on the different Forests of the District. The method is, of course, open to many objections but is the best that has so far been devised. Using it, Mr. Keplinger has made up the following comparative statements:

One showing the total units of major lines of work for the District in 1919. One showing the rank of Forests in quantity of work by these major lines, and the order of Forests (see last column headed "Importance") by total quantities of work. And another showing the cost per unit of work by Forests.

In making such tabulations a number of minor discrepancies, of course, had to be ignored but the statements taken together form by far the most complete comparative statement that we have ever had. They are not sent out with the idea that they are final or that there is not room for a great deal of discussion regarding them. In fact, discussion of the subject is what we hope to arouse by giving you the information. Out of such discussions and thought on the subject, perhaps something can be done toward devising a method of cost keeping or establishing standards that will give a dependable basis for comparing one Forest with another. My hope is that similar comparisons will be made up by districts and that Supervisors and rangers will make it a point to get together and discuss conditions and costs on the different Forests or districts.

FRED MORRELL.

MAJOR LINES OF WORK
District 2
1919

	Timber	Grazing		Maintenance			Recreation
FOREST	Sales	C&H	S & G	Trails	Tel.Lines	Planting	No.Visitors
	Mft bm	No.	No.	Miles	Miles	acres	(Man-days)
Arapaho	8,278	11,961	27,035	293	62	0	102,483
Battlement	276	49,259	10,450	190	123	0	11,768
Bighorn	200	44,314	118,167	157	189	0	48,743
Black Hills	10,147	28,934	12,200	42	73	0	53,658
Cochetopa	3,157	20,297	73,973	302	109	0	26,395
Colorado	4,898	21,790	9,874	219	91	11	387,790
Durango	1,260	13,057	86,892	90	19	0	13,344
Gunnison	2,558	37,030	49,485	329	64	1-1/2	12,249
Harney	5,273	12,435	0	11	124	1	32,875
Hayden	14	7,104	114,265	74	59	0	1,701
Holy Cross-Sopris	6,862	26,145	96,679	404	82	9.7	41,423
Leadville	1,601	9,450	99,880	194	48	0	96,676
Medicine Bow	16,189	11,300	52,900	86	164	0	14,561
Michigan	236	0	91	0	10	399	6,249
Minnesota	2,987	0	0	0	26	441	48,750
Montezuma	991	35,262	53,127	193	21	4-1/2	8,434
Nebraska	0	13,470	0	0	33	514	452
Pike	5,191	17,214	25,625	257	104	584	602,420

Rio Grande	3,750	22,571	239,355	307	87	0	101,416
Routt	1,095	29,243	84,185	133	77	0	11,363
San Isabel	440	12,874	11,875	148	16	0	102,751
San Juan	4,076	12,131	96,345	201	93	0	7,271
Shoshone	247	14,037	75,556	809	165	0	40,805
Superior	5,481	0	0	148	169	0	11,811
Uncompahgre	1,856	32,858	50,850	80	151	0	40,574
Washakie	7,679	12,665	49,710	370	79	0	4,010
White River	1,793	38,821	29,900	102	60	1-1/2	14,653

RANK OF FORESTS
District 2
1919

FOREST	Sales	Planting	Grazing	Lands	Recreation	Protection	Cost. Adm.	Income	Total Work	Work per Man	Importance
Arapaho	3	10	21	18	4	4	18	18	8	6	9
Battlement	22	10	3	11	20	8	22	7	17	7	17
Bighorn	25	10	1	14	9	2	10	4	9	13	7
Black Hills	2	10	11	3	7	2	2	3	3	21	1
Cochetopa	12	10	10	17	14	5	15	12	13	8	12
Colorado	9	5	17	1	2	2	5	15	6	12	5
Durango	18	10	13	21	15	5	9	21	24	25	23
Gunnison	14	8	4	19	18	5	17	11	10	14	10
Harney	7	9	24	2	13	2	8	14	11	18	8
Hayden	26	10	15	25	26	8	24	19	26	10	26
Holy Cross-Sopris	5	6	8	6	10	4	1	5	4	24	3
Leadville	17	10	16	5	6	8	20	17	20	16	19
Medicine Bow	1	10	20	23	17	1	6	1	1	2	4
Michigan	24	4	25	27	24	3	26	27	27	17	27
Minnesota	13	3	26	13	8	3	25	26	22	3	22
Montezuma	20	7	5	8	22	6	14	8	18	23	15
Nebraska	27	2	23	20	27	4	27	23	23	5	24
Pike	8	1	18	4	1	4	3	16	2	9	2
Rio Grande	11	10	2	12	5	7	11	2	5	4	6
Routt	19	10	7	15	21	6	16	13	19	20	20
San Isabel	21	10	22	22	3	6	19	24	26	26	25
San Juan	10	10	12	16	23	7	21	9	16	11	18
Shoshone	23	10	14	10	11	7	12	22	12	22	16
Superior	6	10	26	26	19	3	4	25	21	27	21
Uncompahgre	15	10	9	9	12	8	7	6	15	19	13
Washakie	4	10	19	25	25	6	23	20	7	1	14
White River	16	10	6	7	16	7	13	10	14	15	11

Note: In determining importance, total unit of work is given equal weight with the average of the first eight columns.

UNITS OF WORK
District 2
1919.

FOREST	Units of Work	Units of Work per Field Man	Cost per Unit
Arapaho	13,430	1,401	1.33
Battlement	9,944	1,372	1.47
Bighorn	12,816	1,148	1.58
Black Hills	18,554	947	1.79
Cochetopa	11,100	1,345	1.67
Colorado	13,961	1,163	1.67
Durango	6,656	823	2.19
Gunnison	11,760	1,138	1.54
Harney	11,523	995	1.83
Hayden	4,905	1,280	2.23
Holy Cross-Sopris	17,361	847	2.17
Leadville	9,130	1,014	1.68
Medicine Bow	21,538	1,770	1.05
Michigan	4,466	1,011	2.08
Minnesota	8,373	1,546	1.21
Montezuma	9,470	939	1.97
Nebraska	7,816	1,473	1.03
Pike	18,642	1,309	1.68
Rio Grande	16,047	1,516	1.25
Routt	9,422	932	1.96
San Isabel	4,531	566	3.27
San Juan	10,395	1,223	1.43
Shoshone	11,103	945	1.79
Superior	9,009	515	2.76
Uncompahgre	10,614	986	2.05
Washakie	13,933	1,878	.99
White River	10,655	1,039	1.82

District 3 - Southwestern District

In round numbers, 35% of the gross area of the National Forests on District 3 is in the woodland type, 34% is in the saw timber type and 31% does not bear any timber type of commercial importance.

82% of the total estimate of saw timber on the National Forests in District 3 is Western Yellow pine, 10% Douglas fir, 3% White Fir, 3% Engelmann Spruce. The other 2% is composed of Alpine Fir, Limber Pine, Chihuahua Pine, Arizona Cypress and other species of minor importance.

A rough survey of the area in Arizona and New Mexico bearing saw timber type shows a total area in the two states of 10,300,000 acres of which 900,000 acres has been cut over. The total original stand was 39,600,000,000 ft. of which 4,000,000,000 has to date been cut, leaving over 35½ billion feet of virgin timber. The present rate of cutting is around 180,000 M feet or approximately 35,000 acres per year.

There were cut from the Forests of District 3 during the fiscal year 1920 in commercial sales 69,784 M feet of saw timber, 44,116 cords of wood, 53,751 posts, 1,000 pieces of lagging, 1,019 stulls, 9,303 standard gauge ties and 19,943 narrow gauge ties, 1,352,476 linear feet of poles and 1,149 Christmas trees. The cut of all products reduced to M feet was 87,195 M feet.

The cut under S-22 sales was 347 M feet saw timber, 138 cords of wood, 3,765 poles, 71,315 posts, 177,080 linear feet (mostly poles below 6" in diameter), 450 stays, 12,000 shakes and 386 house logs. All products reduced to M feet equaled 1,281 M feet. The above data is interesting in that it gives a good idea as to what classes of products the National Forests in this District should produce in order to meet local demands.

"For those who are trying to buy a suitable saddle horse and can't, the following facts may be of interest. There are more horses and mules in the United States than there ever were; the largest buggy manufacturers in the United States are six months behind on their orders; during the past season there were not half enough horse blankets to meet the demands; and there is a scarcity of all raw materials which enter into the manufacture of all harness and saddles which is becoming more acute every day. It seems that old Dobbin is still holding his own pretty well with his competitor, the motor car." Santa Fe Bulletin.

"One Congressman insists that, in a good many instances, cattle are raised to maturity and finished for market on our National Forest ranges without ever having had a drink of water! OMYGOSH! Ain't nature wonderful?" The Gila Monster.

The American Lumberman reports large forest fires in Scotland, one burning on a 3½ mile front and 16 miles long. Fighting fire in Scotland has its drawbacks as shown by the report. "The fire fighters have a very dangerous task before them; not only is the risk of asphyxiation great, but falling trees rendered invisible by the dense smoke clouds cause difficulties; furthermore, volunteers are meeting hundreds of adders fleeing from their blazing forest homes. Many of the reptiles are over 5 ft. long and are giving considerable trouble, not infrequently attacking the fighters." Ed: Scotland is still wet.

"Ranger Ketcham reports the result of an interesting experiment he conducted while in charge of the Rosedale District. The house is of the old box type with half pitch roof and Ketcham equipped it with home-made eave troughs in order to secure a supply of rain water. He found, however, that the troughs were not a huge success and upon close investigation discovered that the slope of the roof caused the rain drops to bounce clear off the station yard!!!" Datil Bulletin.

Old Hank, the horse wrangler, who is a typical old time frontiersman, sat on a box spitting tobacco juice aimlessly about the yard. A six-year-old boy was watching him intently and with slight signs of disgust. A little later the boy said to his father: "If I done as much spitting as Uncle Hank, I'd try to learn to hit something." (There is a good moral even to that.) Kirby-Crook.

District 4 - Intermountain District

On July 14, Ranger Tooman arrested one Francisco Lesaraldo, a sheep herder in the employ of the Adams-McGill Company, for starting a fire to protect his sheep from coyotes. He was brought before the Justice of the Peace at Ely and fined $20.00. We have since issued letter of transmittal in the amount of $16.50 to cover the civil damages in the case, making total cost to the violator $36.50. ---Nevada Nugget.

Twenty thousand native trout were received and have been planted in Georgetown, Montpelier, Crow and Preuss Creeks. These trout came through in excellent condition, and, of the three cans which Supervisor Sanford placed in Crow and Preuss Creeks, only one dead minnow was found at the time of planting. We are in need of a great many more fish, but this installment will considerably improve the fishing in the streams in which they were planted, and we extend an invitation to you to come in 1922 and assist in taking a few of them out. ---Caribou News Letter.

On July 11, the Salt Lake Tribune contained a full front page illustrated article on summer homes in Cottonwood Canyon. On July 10 and July 11, the Deseret News contained a full front page illustrated article on Timpanogos. On August 1, the Salt Lake Tribune contained a full page illustrated article on Hansen's Cave in American Fork Canyon. Dr. W. H. Hopkins has also had, in three different issues, full-page illustrated articles on parks and National Forests in Utah, in each of which he has complimented the assistance rendered by the Forest Service. The following is quoted from a letter from Dr. Hopkins:

> "I had a very enjoyable trip and was met and treated finely by the Forest Service on every turn of the road. I received special aid and service from Messrs. Locke and Torgeson at Fish Lake, the Forest Service office in Richfield aiding materially, George H. Barney and Wm. M. Mace at Cedar City and Leland Heywood of Panguitch went to considerable pains

to assist. I admire the spirit actuating the men in the service and the excellent way and manner in which aid and assistance is put into action. To the men of the Service who provided and extended aid and valuable information, I wish to express through you my many thanks."

On July 16 and 17, Frank M. Blackwell of the International Film Service, took moving pictures on Mt. Timpanogos. He stated that he usually figures on finding scenes less worthwhile taking than is represented when he starts on a trip, but that on this trip he has taken at least one hundred feet more film than he anticipated. Although very much tired and about all in after the trip, he states that there has been but one other scene in his experience which was of more interest and that was a view of a living volcano taken from an airship. The International Film Company has 327 first-run houses in the country, while their nearest competitor has only 107, namely, the Pathe. In other words, the International Film Company is over three times larger than its nearest rival.

The American Fork Citizen in its issue of July 17 had nineteen different references to Mt. Timpanogos. Evidently they are beginning to realize that they have something at their own back door. --Wasatch Monthly News Letter.

District 5 - California District

District Forester Redington has been spending the past few days on the Weed Lumber Company's holdings near Bray, Siskiyou County, with Mr. Hodge and members of the Committee composed of representatives of the lumber interests, the University of California, the Southern Pacific Co., etc. The Committee has been making a careful study of the burning operations conducted by Ex-ranger George King of the Shasta, who is in charge for the Weed Lumber Company of burning operations and insect control work. Mr. Redington expects to return to the office on Monday and to leave almost immediately with Congressman Raker and Mr. Rachford for the Sequoia, the Sierra, the Lassen and probably other northern Forests.

Assistant District Forester Rachford has just returned to the office after having spent some two weeks on the Sierra, where he has been making a careful inspection of some of the higher ranges.

Assistant Forester E. E. Carter from the Washington office has accompanied Messrs. Deering and Kotok from the Office of Operation to Sisson. The three are now on the Shasta, where Mr. Carter is making an inspection of timber sale work and Messrs. Kotok and Deering are going over Operation, and particularly fire, matters.

Fire Cooperation. The White & Friant Lumber Co. yesterday agreed to cooperate with the Forest Service in fire protection. Their holdings embrace 13,531 acres on the Sierra Forest and approximately 10,000 acres on the Stanislaus Forest. Several unsuccessful efforts have been made in the past to secure the cooperation of this Company and their action therefore, is particularly gratifying.

District 6 - North Pacific District

Owing to atmospheric conditions and the way that the sun blended with the flames, a fire that burned on the Columbia Forest recently in slashings of the Wind River Lumber Company had the appearance of Mount Adams in eruption. "From Portland Heights and other points of vantage observers with powerful glasses could make out every usual sign that the old volcano had laid aside its lethargy of years and taken a hand in the general unrest." The Forest Service, newspaper offices, and the Weather Bureau were called up to ascertain whether the spectacular light was of a forest fire or of a volcano in action.

Supervisor V. V. Harpham, of the Ochoco, took a party of friends over the new road to the lookout cabin at the summit of Lookout Mountain. Mr. Harpham's machine is the second to have made this climb, and he was a passenger in the first car that negotiated it. Says the Crook County Journal: "As this is the only peak in this country that has a road of this nature to the top of it, we predict that it will be a standing dare to all automobilists from now on."

The lookout house on Mount Hood sheltered a party of mountain climbers from the blizzard that swept the summit July 21, while thunder storms were in progress below. The party, consisting of two men and two women, remained at the lookout house for more than an hour, and then began their descent; the gale forcing them to cling to cables that run down the north side to avoid being swept into space. The snowstorm was left behind at Cooper's Spur, but the wind continued. The party found their first relief after leaving the lookout house in the glacial moraines above Cloud Cap Inn.

In this District, as elsewhere, ex-Army and ex-Navy men have been given pref ence in filling temporary positions during the fire season. One of these, when ask by the supervisor how much rope he had in his pack, replied: "Five fathoms, sir."

Henriette McKaughan, of The Oregon Journal, who for the past two years has satisfactorily reported the activities and news of the Forest Service in this District, spent her two-weeks vacation on a lone hike in the wildest region of the Olympic Forest, where she crossed the Olympic Mountains without a horse and carrying a 60-pound pack. Before beginning her descent, Miss McKaughan sent the following note to her editor:

"To relieve any anxiety you might feel, I arrived here (Elwha Basin, in the heart of the Olympics) Saturday night all O. K. Will spend to-day (Sunday) here, climbing around waterfalls and glaciers, and will start down to Quinault Lake Monday. The Forest Service men have been most lovely to me. Griffen, forest examiner, who was formerly at the Portland office, is 'going out' of here this morning and will mail this. Trails are bad up here and are not marked. Have been 'lost' several times, but not for long. Elk and deer are very plentiful."

Miss McKaughan should have arrived at Quinault Lake on a Thursday, but had not arrived there nor been heard from on the Saturday following. Forest Supervisor Fromme turned his men loose to find her. Ranger Dave Hartsuck, after traveling a day and a night, found her and brought her to civilization. She explained that her delay had been caused by the unexpected roughness of the country along Promise Creek. Miss McKaughan entered the Forest at Brinnon and came out at Quinault. She made a similar hiking trip last summer on the Oregon and Santiam, in the Mount Hood to Mount Jefferson region, an account of which appeared in the August number of The Green Book.

A. E. Parish, managing editor of the Seattle "P.-I.", is in the District Forester's office, assisting in final details of field work in the exchange of school lands within National Forests for blocks near the boundaries. Mr. Parish says that field work connected with the Washington State Land Exchange will be completed by August 19, when there will remain only the work of arranging and checking reports and comparing values before the list for final transfer can be started.

"This season's work has been entirely in the eastern part of Washington. The western part was finished last year, and the reports on it have been worked up. We are now making preliminary comparisons as to acreage and value, so that the lieu land lists can be prepared on short notice. Power-site withdrawals and the method by which they should be handled are points rather in dispute. The withdrawal around the Sultan-Pilchuck area, on the Snoqualmie, affects the holdings which eventually, through further exchange between the State of Washington and the University of Washington, will become the administration forest of the University of Washington, giving this University the largest administration forest in the country."

The Portland sub-base, at Eastmoreland, is now marked by a sign, three by twenty-four feet, which reads "FOREST FIRE AIR PATROL" and is so placed that it may be seen from the car windows of the Southern Pacific.

District 7 - Eastern District

Mr. P. M. Hodgkins has been assigned to the Asheville office as assistant in acquisition.

Pisgah Forest's first hotel was recently opened to the public by Mr. George F. Weston. The name he chose is "Pisgah Forest Inn". It is located high on Pisgah Ridge and overlooks one of the finest views in the southern mountains.

Good progress is being made on the survey of the Marion-Micaville Road in the Boone Forest. The grades will be lighter than were first considered possible.

Another railroad, the C. & N. W. on the Boone, has promised to burn its right-of-way through the National Forest this fall. The question was taken up in a conference between Supervisor Rhoades and General Manager Nichols recently. This railroad has caused some rather serious fires in the past. The example of the Southern in burning its right-of-way between Ridgecrest and Old Fort was an argument used to impress Mr. Nichols with the desirability of removing the menace to the National Forest interests along his railroad.

Forest Ranger O'Kelley, with a crew of ten or twelve men, has been repairing the Pisgah Motor Road during the past eight weeks. The work will take another month. Owing to the shortage of funds and to the high price of metal culverts, split-log culverts made of chestnut are being put in. It is believed that these will last for ten years. The cost complete is from five to six dollars, whereas corrugated metal culverts average nearly that price per foot.

The summer season seems to have been a good one for deer. Fawn tracks are observed everywhere in the Forest. Two elk calves were noticed a few days ago. Young wild turkeys are numerous throughout the game preserve.

That conveniences arranged by the Forest Service for campers are really appreciated has recently been indicated by the long list of names on the new register at the Dolly Copp Public Campgrounds on the Glenn Road, in the White Mountain Forest. The camp is being used quite extensively and the long list of names on the register indicates that the New England Campers are making the grounds an overnight stopping place. Many camp there for days. The camp is supplied with a fine spring, fireplace and fuel, toilets, etc. A campground near Gale River Ranger Station may be similarly equipped by the Service before snow flies, if the labor can be arranged for. If any of the officers happen through Pinkham Notch on a Sunday when their districts are free from fire danger, it would be worth a few minutes to look at the campgrounds.

The business men of Gorham have distributed a booklet prepared by the Gorham Carnival Association promoting the interests of the town. The booklet is entitled "Gorham, N. H., The Year-Round Vacation Town." The center of the booklet has a two page view entitled "The Heart of the White Mountain National Forest". Gorham, Androscoggin River, and the Carter Moriah and Presidential ranges are included in the view. When some of the other towns in the Forest begin to feel the benefit of the Forest, to their tourists trade, more demands will be made for assistance in the preparation of similar booklets.

L. S. Tainter, the late President of the Publishers Paper Company, made a request in his will that his remains be cremated and the ashes deposited in a metal urn and that the urn be buried within the boundaries of the White Mountain National Forest on Mt. Whiteface. If this was not agreeable to the Forest Service officials, the ashes were to be scattered from a point on the Presidential Range to the four winds. Recently Dean Martin, formerly a member of the Forest Service but now with the Publishers Paper Company, assisted Forest Examiner Davis in locating a satisfactory burial place for the urn on the south side of White Face Mountain.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

August 23, 1920.

OUR FORESTRY PROGRAM - (continued)

Address of Colonel Greeley at the Conference
on Reforestation held at Madison, Wis.,
July 23, 1920.

I said that forest fire control in my judgment would accomplish 75 or 80 per cent, possibly more, of the task of getting our lands back in timber growth, but there will be cases, there will be regions, where we must go beyond that, and as those cases and regions become clear, and as we know with certainty what should be done in addition to keeping out the forest fires, we should have the legal authority to make those essential things a requirement on the timber owner. Again, that principle must be coupled with a corollary that such requirements must be fair and equitable in consideration of the actual cooperating conditions; that they must be framed and enforced by local authority in which the interests affected can be locally represented and which will have the maximum opportunity to know the local conditions with which they are dealing.

I had a very interesting talk recently with a forester from Sweden who for some nine years was in charge of one of the counties of Sweden, or a unit corresponding to our county, and who was responsible for carrying out a Swedish law which has put into effect for a considerable number of years substantially the same idea as I have just expressed. He told me that 95 per cent of his work in the course of a few years had become purely a matter of education. It was not necessary to use the club that their law contained, which authorized him as the responsible executive officer, if necessary, to carry out certain things on private lands and charge their cost against the land as a lien on the property. But that county can appoint a commission consisting of one government forester and two timber owners of the county. That commission has charge of the execution of this law and authority under this law to take almost any step which they find necessary to prevent forest lands in that county from being denuded. It is local self government. The men on that commission came from that county; they knew its conditions; they dealt with their neighbors; and he found in the course of nine years' experience, as he put it, that 95 per cent of his work was purely educational, pointing out to timber owners what was to their best interests to do on their lands.

These two planks are the first two commandments, as I see it, in our forestry program - the control of fire and the following of fire control with such other measures enforced by local authority as may be necessary to actually prevent the denudation of forest lands, both of which should be done through the states under the police powers of the state, with such stimulus, such leadership, and such financial help as the Federal Government can give the state. With those I believe we should undertake to largely extend the existing public forests, for we have many areas of cut-over land which will come back into timber very slowly, perhaps not at all, unless planting is resorted to. I think that it is up to the Federal Government and the states to shoulder a considerable part of that work. I think that the Federal Government and the states in the forested regions should both embark on a policy of the acquisition of public forests. There is ample room for both the Federal Government and the states to go into this thing.

New York, Pennsylvania and Massachusetts have gone into it on a large scale. Pennsylvania is now proposing a bond issue of twenty-five million dollars to extend the state forests; Massachusetts is now proposing a bond issue sufficient not only to buy a hundred thousand acres of denuded forest land in that state, but to immediately plant it with coniferous timber. Even figuring a total cost for the purchase of the land and the planting at $25 an acre, in Massachusetts a great many people believe that it would be a wise investment for that state to make, purely from the standpoint of future returns, and wholly regardless of the many public benefits that would result from it or from the public acquisition of forests.

The next point which I think everyone who has considered this question recognizes is a mighty important one is that of forest taxation. It is too big a subjec to spend any time on here. All I want to say about it is that I think any of you who have dipped into the question of forest taxes appreciate that we are not going to make any radical changes without a tremendous amount of public education. It seems to me that the best way to tackle that problem is for each state whose forest resources are important (to work for the designation of a legislative commission which would be instructed to make a thorough study of the subject of existing methods of taxing forest lands upon the denudation of such lands and to report suitable legislation. The Federal Government might, if it were enabled to by Congress, cooperate with these states in making such a study of taxation. It might bring all the information we can gather together and make it available to the commissions of the several states. That would mean a slow process - investigations, hearings, publications, press publicity, and all that sort of thing - but it is only by a slow process - a tremendous amount of publicity and general public education - that you are ever going to get a radical modification of the American idea of property tax as applied to timber land. It seems to me that that is perhaps the best way to go at it.

Our forestry program should also provide for getting much more accurate information on many of the questions that are involved. We need a much more accurate census or inventory of our timber resources, not only our standing stumpage but our timber growing resources, than we have ever had. We need with that much better information than we have ever had on what our national requirements for timber are, region by region, - what the requirements of our principal industries are, region by region. We need to get those two sets of figures to see how far we can fit them together, seeing how much land the country ought to have perpetually in timber.

I think that we would find even in a very few years that a million or two of dollars spent for a comprehensive survey of that sort would be well worth the cost because of the basis it would give us for putting a whole lot of these questions on a much more accurate foundation than it is now possible to do. That is a subject in which the Federal Government ought to take the lead. The states can help, they can cooperate in it, but there should be a central organization with a large appropriation behind it to carry it out.

These are the five main points which it seems to me our forestry program should aim at. There are, of course, others, but I have sheared the program down to what seem to me to be the five essentials. How should we go at it?

In the first place, we should have, sooner or later, sooner if possible, a comprehensive federal forestry law which should include those same five points. Its first plank should be an appropriation, which I have put at not less than a million dollars, and which the Secretary of Agriculture has already authorized me to incorporate in the next estimates that go up for the Forest Service. This is to enable the Forest Service to cooperate with the states in Forest fire prevention, in working out the methods of handling various classes of timber land, in addition to fire prevention, which are necessary to actually keep them in timber growth, and in other phases of forestry which the Forest Service might fin it desirable to take up with any of the states.

The expenditure of this million dollars would be regulated on the same basis as the expenditures under the Agricultural Extension Act and under the Federal Aid Road Acts,- that is, that the states must put up at least dollar for dollar with the Federal Government. The expenditures under that act should be further limited to states which meet what the Federal Government regards as essential minimum requirements in fire protection and methods of cutting, but I wan to say right here that if such an act as that were passed and I were responsible for administering it, I would say to the states that the thing we want to get across first is fire protection. Let us concentrate on that - and when we really begin to get our fires under control, when we really feel safe, at a conservative minimum in our fire hazard, then we will take up with you what is necessary in addition to fire protection, to actually get these various classes of land restocked with timber.

That is the first plank, a plank for cooperation with the states in fire protection and other things.

The second plank should be one for extension of the federal forests by purchase and by consolidation through exchanges.

The third plank should be one that will enable the Federal Government to assist the states in working out this question of forest taxation by federal investigation, federal publicity, federal cooperation with any state, here or there, that is willing to take it up.

The fourth plank should be a provision for a general survey of forest resources that I spoke of, and in that I would include, where it is necessary, cooperative studies with the state in regard to classes of land that should be devoted to forest purposes.

So much for federal legislation. Now, concurrently with that we need state laws which will carry out the state end of this game, because the plan that I have outlined is not going to be effective unless we get the states in it. We have got to work through the states; we have got to use the police powers of the states to get results, and the scheme to be effective must have state laws running concurrently with the federal laws.

Mr. Pooler Raises Some Inspection Questions

The District Forester to the Forester.

"Dear Sir:

I was much interested to receive your letter of July 28, (directing that inspection outlines be prepared and used on the Forests.)

A copy of our inspection outline, which is just being issued as an Administrative Guide amendment, is enclosed herewith.

I find it hard to reconcile the views expressed in your letter, in which I concur, with the general tenor of the sample outline from D-2 which was enclosed with your letter. It seems to me that the D-2 outline has the same fundamental defect as the D-5 outline of June 8, 1920, and the old D-3 outline used here years ago, in that it is more like an index to the Manual than a list of reminders on vital points. It is our experience that these outlines of the "index" type are seldom used by inspecting officers and, moreover, create an erroneous impression in the field of the what and wherefore of general inspection work.

The D-3 outline enclosed is based on the assumption that the specialist needs no outline for his own work, but that every inspecting officer needs a reminder of vital points on work other than his own. The objective of our outline is to help kill the tendency for specialists, including Assistant District Foresters, to inspect their own work only, and to help correct the large waste of travel time, travel cost, and mental energy which has followed in the wake of this tendency.As an auxiliary to the inspection outline, we have our inspection card system under which follow-up cases on each Forest are turned over to the officer inspecting that Forest regardless of office lines. As an additional auxiliary all inspecting officers are now being asked to assist in personnel ratings of the Forests which they have inspected, which is in conformity with our policy of requiring each inspecting officer to bear a definite personal responsibility in the work of judging the field personnel instead of turning all this work over to Operation and the District Forester.

I wish especially to endorse your statement that the inspection outline should reflect current issues and be subject to at least annual amendment. In this connection I wish to point out that our outline is only a tentative one, and that especially with regard to that part of it dealing with administration and finance, we hope to get out next year a new outline which will not only consist of reminders of vital points but will list in connection with each point pertinent figures taken from a statistical analysis of conditions within the District. This of course, is a large subject in itself and one on which this is not the proper place to comment in detail, except to state that we have prepared a statistical analysis for 1920, are preparing a similar one for 1921, and before another year has passed will have sufficient basis for carrying out the idea briefly indicated above.

Your comment at the bottom of page 2 of your letter seems to me to be a reaching-out toward a matter which has already engaged our attention here, namely, an actual Forest rating. We expect to work out during the present winter a tentative system for rating Forests against each other as to their accomplishments alon each line of work. The tabulation of the inspection record which you propose woul of course, be one of the basic steps toward making the ratings in question.

We issued our outline as an Administrative Guide amendment rather than as a note-book record because our inspecting officers use various note-book systems whic would be hard to fit with a uniform outline, and because Administrative Guides are always available at every field station and the outline may therefore be readily consulted at any time, not only by inspectors but by the field men themselves.

The proposed Manual instructions attached to your letter are already to som extent complied with in this District.

Very truly yours,

Frank C. W. Pooler

(Is it true, after all, that specialists need no outline for their own work? Is it not a common thing that specialists are so close to their work that they lose their sense of relative values and give undue attention to details that are relatively of minor importance? Do not specialists often need a check list of things as they ought to be on the Forests, in order to be sure that they pound away, not on the things that happen to come up but on the things that are really essential? The Editors.)

Fish Fry -- Not a Shad Bake

Recently the Commissioner of Fisheries advised the Forester that his Bureau had already allotted every single fish available for stream-stocking for the year 1920, and that all applications for fish fry received subsequent to July 1, 1920, had been filed and could not be acted upon until next season. Not long ago a member of the Bureau of Fisheries stated that the demand for fish for this purpose had become so very heavy that it was impossible to fill anything like a reasonable number of the applications.

All over the country there seems to be an awakening of the Izaak Walton instinct, and streams that have been void of fish for many years are now being restocked. Much of this activity is ascribed to the use of the auto which has brough the American people out into the woods on holidays and Sundays in great numbers. Naturally they seek some means of amusement, and fishing appears to be the first thing sought. The supply of young fish is far below the demand, and new plants for hatching the fish must be established all over the country if the streams already stocked are to be kept up to a point where they will furnish a moderate amoun of sport and fish.

From all indications the West is far ahead of the East in this matter of stream-stocking, but eastern fishermen are waking up and many long-forgotten trout streams are to be restocked.

Will C. Barnes

Livestock Conditions in the West

It may be of interest to the readers of the Bulletin to hear something about the general livestock conditions throughout the Western Range States, as I observed them during a 4½ months western trip from which I have just returned.

On arriving in Montana the forepart of April, I found the stockmen completing the longest and most severe winter in their experience. The severe drouth of the past summer, which centered in Montana and extended to the adjoining States, materially reduced the forage supply available for winter purposes. This resulted in hay going to $50 and $60 per ton with no great amount to be had at any price. Similar conditions prevailed throughout Wyoming, Colorado, Utah, and southern Idaho.

Most stockmen this spring found that they had been out for feed from $30 to $35 per head for cattle and from $7 to $8 per head for sheep, on account of the severe winter. To meet this situation many of them were compelled to borrow heavily from their local banks. The high livestock prices prevailing during the past few years made the floating of loans a relatively easy matter; later it became necessary for the banks to increase these loans as the necessity arose, in order to protect themselves. Under these conditions, heavier loans were made in some instances than good business judgment would justify. Naturally, with the approach of spring, loans on livestock became more difficult to secure. This resulted in the circulation of a rather general report of a shortage of money, while in reality the trouble was more a lack of adequate security.

The stock market was very sluggish this spring with prices slightly less than those of the preceding fall. The wool market started out rather briskly, and flockmasters who made early sales received around 60 cents per pound for their wool and were able to make satisfactory liquidation on their indebtedness. However, only a few sales were made before the wool market became inactive with no offers on wool at any price.

A meeting of sheepmen and officials of the Federal Reserve Banks was held at Chicago in June, and arrangements were made to allow local banks to give sheepmen an advance on their wool-warehouse storage receipts. This afforded only partial relief, because in many cases these banks had already made as large an advance on the wool clip as they considered safe or advisable.

The banking houses, however, are standing behind the stockmen and undoubtedly conditions will readjust themselves in a short time. Climatic conditions during the spring and summer have been unusually favorable for forage growth; in fact the range never looked better, and while both cattle and sheep for the most part went on the ranges in poor condition, they are gaining flesh rapidly and will go on to the market this fall in prime condition.

The Forest authorizations, as a general thing, are fully taken up; but in many cases the number of stock that is being actually grazed is less than the number permitted. This is due to spring losses occurring after the applications were submitted.

J. W. Nelson.

Reforestation a la Phoenix

At the Priest River Experiment Station, a half-acre of burned virgin white-pine timber was seeded with a half-pound of western white pine seed, shortly after the fire. The following winter the land was logged. The stand of seedlings obtained was equivalent to 464 per acre. Practically all of the germination took place on the ashes or heavily burned surface, and particularly where the horses had trampled the ground. Good results were also obtained in sowing western larch, Douglas fir, lodgepole pine, and Engelmann spruce on the fresh ashes in the fall. In this manner it may be possible to secure speedy reforestation of burned land in different localities.

Misinformation

An item of "information for the press" has recently been received from the Southern Pine Association, the second paragraph of which in particular is something of a gem. The item is in part as follows:

"The broad manner of considering reforestation problems as expressed by Chief Forester Greeley at the recent Forest Laboratory conferences at Madison, Wis., seems to point out a much more liberal attitude toward the lumbermen.

"Mr. Greeley stated that the lumbermen should not be held responsible for the disappearance of the forest because they engaged in supplying the demand of the public for lumber. He also expressed the opinion that the lumbermen are under no obligations to reforest cut-over areas, and that nothing could be gained by Governmental control of the manufacture of lumber.

"This position taken by the head of the Forestry Service for the United States will doubtless increase recognition on the part of the public that the lumber industry has proceeded along the only lines possible."

This misrepresentation of the Forester's statements is obvious when the above quotation is contrasted with such sentences as the following, taken from the address of which the last installment is carried in this week's Bulletin:

> "I think at the same time that the forest owner must recognize that he has a responsibility as well as the public; that in the long run the forestry movement will increase the value of his land; that in the long run he has a responsibility not only not to permit the condition of his property to be a menace to his neighbors but not to permit the condition of his property to be a menace to the industrial welfare of his country."
>
> "That (i.e., reduction of fire losses) must include all classes of forest land. It must include the cut-over land, the land that has been denuded by forest fires, the land once in timber but not cut and unimproved and now being made no use of; it must include, in my conception, every class of forest land unless that land is economically in demand for some other use."
>
> "Our forest protection plan must include the disposal of slash * * The disposal of slash must, the country over, be recognized as a part of the logging operations. These things I would accomplish under

the police powers of the State, applying the principle I stated a few moments ago, the Federal Government working as a cooperator of the State, and looking to the State to carry these requirements out with the private owners."

"I said that forest fire control in my judgment would accomplish 75 or 80 per cent, possibly more, of the task of getting our lands back in timber growth, but there will be cases, there will be regions, where we must go beyond that, and as those cases and regions become clear, and as we know with certainty what should be done in addition to keeping out the forest fires, we should have the legal authority to make those essential things a requirement on the timber owner."

Wants

A former National Forest examiner, with a record of years of good work on entry surveys, and with one season's successful work at triangulation, desires restoration to the rolls at any reasonable sort of a job. Communicate with the Branch of Operation, Washington, D. C., if you have an opening for such a man.

Mr. George H. Myers, who has a forest tract of several thousand acres at Union, Conn., has written the Forester as follows: "Please keep an eye out for one of your Rangers who may want to come East and must leave the Forest Service; one who could take charge at Union. The pay would be $1,500 to $1,800 with house and some supplies furnished." Full particulars will be furnished those interested upon application to the Forester.

A Chance for Our Scribes

The following paragraph is taken from a letter recently received from the Editor of "Travel":

> "We are always on the lookout for articles, well-illustrated with snapshots especially, on western life, and should be glad to see articles along this line, if your men ever do this sort of thing - not too scientific, but with facts and impressions together, about 2,000 to 4,000 words."

"Travel" is published in New York. The Washington Office will be glad to transmit to Travel any contributions which members of the Service may wish to submit, after approval of the Department has been secured. Such articles should be transmitted through the usual channels, with a letter stating that they have been prepared outside official time and that permission is requested by the author to offer them for publication in "Travel", with the expectation of receiving compensation from the magazine.

Anybody Seen One?

One of the evidences of spreading interest in forestry is a brisk demand on the Washington Office for information of many kinds. Writers, publishers, and others are, for example, beginning to take hold of the fact which the Forest Service has steadily sought to emphasize, that the newsprint problem is fundamentally a problem of forestry, not of foreign or domestic trade.

We are now getting requests for copies of Bulletin 343, "Groundwood Pulp", which was published in 1916. This is the bulletin which had with it sample sheets of paper made from groundwood pulp obtained from various woods. There are no copies available at Washington. If any members of the Service or field offices have copies of this bulletin which are not needed, their return to the Washington Office will be appreciated.

It is perhaps appropriate to remind our field officers again that old or new Government publications, retention of which is not desired, should be returned to the Washington Office. DON'T PUT THEM IN THE WASTE BASKET! WE CAN USE THEM, IF YOU CAN'T!

From the I. C. S. of the Forest Service

It has been suggested to me that I should be able to write something of value on our correspondence school work. Perhaps I should, but why do it? So much has already been written and is available in the circulars of our big correspondence schools, covering the whole field, that it scarcely seems worth while. What applies to correspondence schools in general applies to our work. In our straight correspondence courses, we follow pretty much the same methods and are circumscribed by the same limitations as the best private schools. In fact, when I came to the District Office for this work two years ago, I at once subscribed for a standard correspondence course. Not that I wanted the course, but that I wanted their methods of giving it. Besides their general methods, I got two ideas that have been of value: I noticed that if the school sent me mineographed corrections to my papers I never was interested enough to take time to read them, but if the instructor wrote on my paper in red ink, I always wanted to see what he said. Assuming that others would be like myself, we have entirely given up the use of mimeographed form corrections although they do save a great deal of time. Another thing I noticed about myself was that if the instructor was a bit careless in his statements and left an opening wherein I could go back at him, I would take any amount of time and study in order to get the thing straight so that I could go back at him right. There is a principle involved here that is of value, but as yet we have no definite method of using it.

The District 2 Supervisors last winter went on record as believing that all our courses should have a direct bearing on Service work. We have not so limited our courses and believe that we have now demonstrated to them that we should not. Last winter, we began a little course in Animal Husbandry. It was essentially not a "grazing" course and did not deal directly with any of our own problems. However, it has indirectly done more to increase interest in "grazing" than any other one thing that has come to my attention. For example: To the ranger who has taken this course, a sheep isn't just a sheep; it is a Lincoln, a Corriedale, a Romboullet. The ranger student is interested not merely in "bedding-out" but also in the big problem of the sheepman, how to secure and hold the cross-breed best adapted to our western ranges. This new insight into the sheepman's problems has quickened his interest and placed him in a better position to secure cooperation.

It is our plan to supplement each correspondence course with a short field course of personal instruction, but on account of the shortage of funds this has been temporarily postponed.

Besides our correspondence courses we have what we call "reading courses". These courses require but little writing on the part of the one taking the course and have proven very popular and effective. One such course has, I believe, been of more direct benefit to our organization than any of the more elaborate courses.

One feature of our educational program has been to encourage the use of our library. The principal feature of this has been an effort to make the District library more available and more useful to field men. Past experience has convinced us that there is little need for a library in the Supervisor's office. It is not used. It is no more inconvenient for a Ranger to request a book from the District Office than it is from the Supervisor's Office, and usually involves but little more time. The Supervisor needs a few reference books only. By concentrating on one library instead of twenty-seven, we should be able to build it up and make it of real use to the organization.

This work is now well started. Although this is the busiest part of the field season, there are now 34 books in the field. If the Library Committee could be induced to adopt a more liberal policy, there is no doubt that the library would become a real, vital force in our development. But we cannot get the kind of books we need, books that men will read. We have on our shelves book after book that the card shows has not been used since about 1909. Perhaps we should read these books, but we don't; and when we ask for books that we will read, we are turned down. A year and a half ago, several Supervisors contributed $2.50 each, bought thirteen books and donated them to the library. These books have all been in constant use, and we now have waiting from one to three requests for each book.

A book to be of value to you need not deal directly with your problems or work. We do not want a book to tell us how to handle our job. Its true function is a "thought starter". Ideas do not fall upon you from a clear sky. Something must give them a start, then one sprouts from another. The idea in the book we probably cannot use, but it starts us developing another that we can.

This, in a general way, is something of what we have done; the following is what I think we should do:

Each ranger, when entering the Service, should be sent to a central training camp and given intensive training in all lines of forest work. The camp should be located on a large ranger district where there is as great a variety of work as possible so that the men may do and see as much actual work as possible, but their training should not be confined to this. Both text book and laboratory methods should be used. There should be a definite course of study. It might include a study of the regulations, elementary forestry, surveying, animal husbandry, grazing management, sales practice, construction work, preparation of reports, and, since a ranger spends 1/4 of his time in the office, office methods should have a prominent place.

The most progressive industrial organizations have given up the old idea of incidental training by other workmen or the boss and are rapidly introducing training shops, while the army found the training camp invaluable.

In cooperation with two Supervisors, I have worked on some of the details of such a plan and believe we can show that it would result in actual money-saving to the Service.

With such fundamental training as a basis, further training and development could be encouraged and directed by correspondence courses, reading courses, conferences, and assignments.

P. Keplinger.

(What are the titles of the books the Supervisors bought? Why was the purchase of readable books turned down? Is it true that Supervisors' libraries are not used? We want to know more. In the following letter Mr. McKee doesn't seem to think much of the practical value of Supervisors' libraries to Rangers. The Editors.)

"Valparaiso, Fla.,
August 8, 1920.

Editor of the Bulletin:

Dear Sir:

I wonder how many ranger stations are supplied with a library of technical textbooks on forestry. I have no such books. Perhaps it is my fault, but the fact remains that I have not got them. I do not contend that all the rangers need or would make use of these books, but undoubtedly there is a goodly number that would. The same holds true of technical magazines. It is realized that it would be a costly proposition to supply all the rangers with a library, but a start might be made by supplying those where needed.

Since the ranger is the one that comes more directly in contact with the public than any other Forest officer, I think he should be well informed on the policy of the Service. A regulation does not mean anything to the public unless you are able to back it up with a good reason. I wonder if all the rangers can discuss intelligently the problems on their Forests and picture what it should be many years hence. I doubt if they could.

The Press in general, and the Weekly Bulletin, has had a great deal to say about the Capper Report. Suppose some one should ask a ranger something about it. What could he tell them? We are in a position of having heard a great deal about it, but not knowing anything about it I believe that quite a number of rangers would be glad to receive a copy of this report. The 990 rangers have considerable to do with running the Forest Service and they should not be lost track of in the deciding of weighty matters at the top.

The Forest Service desires and is in need of good pictures. Good cameras and films are furnished to some of the field men, but no instructions for taking pictures. I have a good Forest Service camera and have tried, all the way from the manufacturer to the library in Washington, without any success, to get a book of instructions. I have sent in several rolls of films, and after a wait of several months (six on some occasions) they are returned check-marked as to what is wrong with them. But I have nothing as an aid to rectify mistakes. Would suggest that books of instructions be procured and sent to all those that have cameras in their charge.

The discussions running in the Weekly Bulletin, especially those from the Washington Office, are very interesting and helpful.

E. R. McKee,
Forest Ranger,
Florida National Forest.

Forest Products Laboratory Notes

The Official Decennial Program, which was sent to Mr. S. J. Record of the Yale Forest School, by some chance had no printing on the inside except the two Forest Products Laboratory seals. In acknowledgment, Mr. Record mailed it back to Mr. Winslow with the following written across the blank pages:

> "The Forest Products Lab. must have an unsuspected sense of humor to send out a thing like this and call it a "program showing in some detail", etc. - Some detail, I'll say.
>
> S. J. Record"

The Director received a distinguished group of visitors at the laboratory on August 19 and conducted them through the Main building.

The party consisted of Prince Carol of Roumania and eleven attaches including the Prime Minister of Roumania, the Roumanian Ambassador to Greece, a General, Colonel, Captain, and Lieutenant in the Roumanian army.

Their names in the visitor's register form a very interesting page headed by the signature, Carol, Prince of Roumania.

The Prince spoke English well and seemed informed on the subjects of Pulp and Paper and Kiln Drying. He showed much interest in our work along these lines.

The other members of the party were accompanied by interpreters.

Owing to the limited time spent in Madison, it was not possible to visit the other buildings of the laboratory.

A telegram received from Mr. MacLean on a recent departure, ostensibly on laboratory business, read as follows: "Leave this morning for Paradise. MacLean."

It is not generally known that we are doing any cooperative work with Paradise, though Preservation of course is the logical section to handle it. Thinking it all over, the laboratory is well equipped for cooperation anywhere, either in this world, or the next. For the other Department of the Hereafter, we can offer cooperation through our Section of Kiln Drying.

District 2 - Rocky Mountain District

T. W. Norcross, Acting Chief Engineer, has just completed a trip through the District, during which he inspected a large number of road projects, both major and minor. He was accompanied by Mr. Mendenhall, District Engineer. During the latter part of his trip he was the guest of the Bureau of Public Roads in the Buick car driven by Mr. Palen, who has charge of the Forest Service major projects. Mr. Norcross was left on the Western Slope on Saturday, on his way to District 4. He seemed to think excellent progress was being made by the Bureau of Public Roads on the major projects and also that the work being done by the Service on the minor projects was very good.

Forest Inspector C. G. Smith, of the Washington Office, is examining timber sales on the Medicine Bow in company with District Forest Inspector Peirce. He is expected in Denver the latter part of this week.

Assistant District Forester Leopold of District 3 is now visiting the Fremont Experiment Station. Later he will make a trip to the Cochetopa with Mr. Keplinger and a trip over the Leadville with Mr. Granger.

The use of airplanes for fire patrol in this District will be given a test this week through arrangements made with two local airplane concerns, whereby small fake fires will be set on the Colorado and San Isabel Forests, in localities not known in advance to the pilots, who will then see how quickly they can discover the fires, make a landing, and get a report to the office of the Supervisor. In each case the plane will probably carry the Supervisor of the Forest as passenger. The chief value, at present, of these tests will be the opportunity for fire propaganda publicity, which will be beneficial both to the Service and to the airplane concerns. The latter hope, of course, either to sell planes to the Service or to make arrangements for regular paid patrol, but they understand that these are dependent on the results of present experiments of the Service in the Pacific Coast District, and on larger appropriations. Meanwhile, they have agreed to have all their pilots keep a sharp lookout for fires and upon discovery of one to fly close enough to investigate, proceed to the nearest landing place, and make report to the Forest Supervisor.

Reports received from the Forest Supervisor indicate that there will be an enormous crop of western yellow pine cones in the Black Hills. The Forest Supervisor at Custer, South Dakota, reports that he has never seen such a number of pine cones and that it will be possible to collect great quantities of seed. Arrangements are being made to collect 1,000 pounds of yellow pine seed which will be used to raise trees at the Government nurseries for planting in the mountains.

There is also a bumper crop of Norway pine cones reported from the Forests of Minnesota. Crops of Norway pine seed occur infrequently; in fact, this is the first one of any size that has been reported since 1915, previous to which the crop of 1910 was the largest known. Norway pine seed retains its vitality for a much longer time than the seed of most forest trees; in fact, tests made last winter showed that 75 per cent of the seed which was collected in 1910 was still fertile.

During the past fiscal year the total receipts from timber sales in District 2, including Minnesota receipts which are credited to the Indian Fund, amounted to $287,446.35. This amounts to an increase of 25 per cent over the fiscal year 1918, the highest previous record. The amount sold increased 19 per cent and the value 32.4 per cent over the figures for 1918, while the amount cut increased 12.3 per cent and the value 14.2 per cent over the 1918 figures. With the increase in freight rates on West Coast material and the increasing demand for timber in the Rocky Mountain Region, it should be possible to at least maintain the record of the past year.

C. M. GRANGER,
Acting District Forester.

District 3 - Southwestern District

The net receipts of the District for July amount to $27,182.69, which is $7,000 more than a year ago, the increase accounted for entirely from timber sales.

The Crook and Tonto carry off the prize with only $15 leave without pay each during the past fiscal year. Is this because of the healthful climate or because of the absence of trout fishing?

Mr. Fred Miller, formerly Ranger on the Manzano, but for the past 6 months with the Insular Forest Service of Porto Rico, has returned to the Southwest and will work as Grazing Examiner with the grazing reconnaissance party on the Apache. Fred says the Southwest looks good to him after investigating Porto Rico.

"New York Sun, commenting on Secretary Meredith's report on the timber situation (the so-called Capper Resolution report) says: 'The National Forests and the National Forest Service are an example and an inspiration to the whole country.'"

"The forest economists on whose recommendation a study of the Pinon crop as a source of revenue is to be made, might well turn their attention to acorns. The gathering of bellatas, or the acorn off the emory oak, has probably brought more camping parties to the Coronado this year than anything else. 200,000 pounds would probably be a conservative estimate of the season's harvest - and they retail in Nogales for 20 cents per pound. Yet, only a small part of the crop is gathered. Spend your vacation on the Coronado, gather acorns, and cut down the H.C.L."

Coronado Bulletin.

San Francisco is spending $77,000,000 to perfect its water system. Los Angeles has spent $25,000,000. National Forests play an important role in the protection of the watersheds involved in these two vast projects. In this same connection, the recent water shortage which has affected Tucson has turned a large amount of discussion and attention to the Catalinas as a possible source of water much superior to Tucson's present supply both in quality and quantity. The Catalinas may enter into a new and vastly greater role of importance to the city in the years to come.

On returning from his work one evening Forest Examiner Westveld discovered a small fire in tall grass. In his mad search for tools he was able to find an old iron barrel hoop and with the aid of this and his big hobbed elevens was able to extinguish the blaze which spread rapidly. On reporting the fire to the Coconino office he was asked the price of extinguishing. "One pair of shoes," was his prompt reply.

"Prof. Spauldings' comment in the Weekly Bulletin, 'Are we Making Wobblies out of Working Men', should be noted by all, since the labor problem of the country today is acute. It is obvious that every member of the Service who has charge of men needs to study seriously the handling of labor. Above all things, men should be treated courteously; see to it they are well fed and made as comfortable as possible. Do not ask them to do anything you would not do yourself - if they must be driven to meet an emergency, drive with them - do your share of the work and they will not complain. Show every member of the public you are interested in his suggestions and interested in your work. A kind and cheering word at all times is worth millions. Maintain their confidence and you will have no trouble. These policies are in force on the Crook and we have the fullest cooperation of the entire community." T.T.S. - Crook.

An unsigned post card reading as follows and addressed to "District Forest Ranger, Albuquerque," has been received: "As a suggestion for an improvement please leave a pencil with a visitor's register at lookout points on the National Forests." To people coming from a distance and visiting the more accessible and popular lookout points, the trip is quite an event. Under such circumstances most of us instinctively like to leave a record of our visit. For this use visitor's registers were furnished most of the Forests some years ago. The man who wrote the above suggestion evidently was disappointed in not being able to leave his name. It is much better and certainly more interesting to ourselves and other visitors to have these names in an attractive register than scrawled on lookout towers and cut into aspen trees. As a suggestion, why not check up the condition of our visitor's registers on some of the more commonly visited points and ranger stations near recreational areas.

The Federal Board for Vocational Education thru its Division of Rehabilitation located in San Francisco, has asked this district to place one of its men on either the Tonto or Coronado Forests. This will make the third of such men whom we now have in this district receiving a training in National Forest practice. In this time of depleted personnel the acquisition by a forest of a vocational man should be a boon, as for instance, this last applicant has an excellent mechanical and electrical training and is supported entirely by the board. He is a tubercular suspect but capable of physical exertion.

We should have more of these men. We can use them and the conditions for regaining health exist in connection with most of our work. The practical consideration, of course, is whether there are accommodations for such a man at any field point. We desire to know all places where such men can be used to advantage and particularly the places where they can be accommodated. Rangers can take the initiative in this matter and inform supervisors if they have the space for a man; reports from supervisors covering their forests will be expected.

"We hear considerable about the various duties of the ranger, the trying times of the Supervisor, the 'bear' and 'fish' stories about the different members of the Service, but very seldom do you hear anything about the poor Clerk. As Mr. Morris once said " Clerks is Clerks - everybody has them," but let us look for a minute at the Clerk in the F.S. We are not called on to measure 'Forest Users wives for corsets' it is true, but who generally has to wait on visitors and is supposed to answer every conceivable question about trees, blackleg, homesteads, loco, fires, pigs, petrified forests, etc? - the Clerk. How about the delinquent closing reports, special uses, grazing fees? Who worries - the Clerk. How about Statistical Reports, timber cut and sold reports, financial statements, improvements,inventories, property returns, forms 26, and a thousand other things - if an error is made, who is generally blamed - the Clerk. Who has to watch and correct the mistakes of rangers, Supervisors, and the rest? - the Clerk. Who gets the low wage - the Clerk. I'll say the responsibilities of the Chief Clerk come next to the Supervisor's. At any rate - WHERE WOULD THE SERVICE BE WITHOUT THE CLERK?" Stiles - Crook.

District 4 - Intermountain District

The Wyoming Forest boasts of having not a solitary fire this season. We wonder how many Forests can claim this 100 per cent record.

District Engineer J. P. Martin is taking an extended trip over the major and minor road projects in Utah and Nevada. He was met by Acting Chief Engineer

Norcross at Paradox, Utah, and they will take the entire trip together.

The following is an example of the general optimism shown by violators of the trespass regulations on the Humboldt Division. This man soars from District 4. In reply to a letter notifying him that his horses were in trespass and that he would be given a certain time in which to remove them, Mr.________ has the following to say: "but i think that those horses have a right on their because i payed on my cattle in the Humboldt National forest for the year 1918 and didn't put no cattle on their so I didn't get no money back." --Humboldt Hum

On July 22, the body of Joseph Unger, a wealthy Pittsburg man who was lost on Rapid River last October, was found by a sheep herder, lodged in a pile of driftwood in Rapid River about four miles below the Rapid River Ranger Station. A coroner's inquest was held in Challis and the jury decided that he had died from exposure. The most likely cause was that he fell into Rapid River while trying to get across and was drowned, as it seems very improbable that a man woul get lost and die from exposure in a country where there are so many trails runnin in every direction as there are in that section. -- Challis Chinook.

Forage conditions continued very good during the month of July; in fact, stockmen report that the range is better than it has been for a number of years. Lamb shipments were rather heavy, and while the weights were generally good, markets have been somewhat erratic. No wool has been sold as yet, and, generally speaking, the sheepmen are much discouraged over the situation.

A great many tourists visited the Forest during July. Fishing is reported to be rather poor, but to have good fishing for the number of people that are concerned will demand restocking on a very extensive scale.

Two representatives from the G. L. Chester Film Company of Los Angeles arrived during the month to film the Sawtooth region. This Company releases, under the name of Outing-Chester, their product, which has wide circulation over the country. All possible assistance was given them in order to make the series as comprehensive as possible. -- Sawtooth News Letter.

The number of tourists visiting Bryce Canyon is increasing very rapidly. Early in the month the Boy Scouts' caravan visited the canyon, some 300 strong, and last week we witnessed the rare spectacle of seeing 50 automobiles on the main street of Widtsoe at the same time. They were all tourists returning from Bryce Canyon. It is not unusual now to see 40 or 50 cars at the Canyon at one time and upwards of 150 were counted there one day this month. Cars from every part of the United States are passing through. It is reported that General Pershing visited the Canyon during the month. It is only recently that we have begun to realize the wonderful scenic attractions in our Forest. We were born and raised among them and long association has made them rather commonplace to us, but when we hear people from New Jersey and New York so extravagant in their praise of the wonderful beauty of the Canyon, we begin to realize that it is really one of the wonders of the world. Last week we talked to a very wealthy man from New Jersey, who said he had never seen anything to equal Bryce Canyon in his travels over a greater part of the world. -- Powell-Sevier Monthly News Letter.

District 5 - California District

Fire Publicity that Multiplies Itself

August 16, 1920.

To the Press of California.

Gentlemen:

A lightning storm on August 4 started more than 230 forest fires on the National Forests within some eleven counties of Northern California.

With the excellent cooperation rendered by local residents;- ranchers, miners, county and town authorities, etc.,- all but six of them had, up to this morning been brought under control.

Those six, three of which are in the Hat Creek District of the Lassen National Forest, two in the Modoc and one in the Trinity Forest, are still beyond control and are estimated to have covered, to date, more than 25,000 acres.

Reports from the north state that the atmosphere is so laden with smoke that neither our regular lookouts (stationed on the higher mountain peaks) or the Air Patrol are able to discover new fires until they assume alarming proportions.

The deer season, throughout most of the Northern California, opened yesterday. That has always meant, in the past, a decided increase in the number of men caused (trough careless) fires.

Cooperation has been asked of and granted by the Railroads and their employees, Lumber and Power Companies, drivers of common carrier stage-lines and others. Measures are being taken throughout the State to insure every possible precaution against new fires.

May I ask your cooperation for the same purpose? If you can review present conditions, warn your public of the critical situation that now confronts, and urge care with fire,- care particularly with lighted cigars, cigarettes and matches and with camp fires, you will have done what I conceive to be a real public service

Very truly yours,
PAUL G. REDINGTON,
District Forester.

Unsolicited Fire Publicity Which Counts

The following verse is displayed in a conspicuous place in about every other issue of the Alturas Plaindealer during the fire season, without the solicitation of the Forest Service:

Only a man in a
forest green.
Only a match that was
dropped unseen.
Only a flame - some
leaves and wood.
And only a waste where the
forest stood.

A Horrible Death

Larkspur and Water Hemlock, as well as the annual crop of hunters, all cause many deaths to cattle on National Forest ranges in California, but of all the horrible deaths to which range stock are subjected that reported in the Indian Forester for June, 1920, takes the cake. "The native is convinced", according to the magazine mentioned, "of the necessity of burning the forests at intervals of not more than four years in order to improve the growth of grass and to rid the forest of the dense covering of pine needles which not only checks the growth of grass but causes death and injury to his cattle by its slippery surface." One more argument for the light burners. -- California District News Letter.

Chas. W. Sutcliffe, Dist. Ranger, U.S.F.S.
"Hope the fire record in your district for 1920 will equal that for 1919, this was 100 per cent. This record was indeed a phenomenal one, due in a large measure to the vigilance exercised by you and your subordinates. With personal regards, and hoping to see you soon, I am
Yours truly,
Power Timber Co.,-H.T.Powers."

Fish Planting on the Stanislaus Forest.

Forest Ranger A. E. Freer says:

"On July 28th at 5:15 P.M. I met the Sierra Railway passenger train at Tuolmne, and received 15 cans of trout fry, all Loch Leven, and in excellent shape.

"Help was plentiful, and the sports of the Tuolmne fought for the privilege of planting the fish and to see that they were planted right. The fish were at once transferred to waiting trucks and 9 cans were taken to the North Fork of the Tuolmne River and 6 cans to Hunter Creek. Both streams are very popular fishing places and therefore heavily fished. The planting was well distributed and carefully done and I have never seen as healthy and lively a shipment of fish planted.

"Another shipment of fish is promised Tuolmne County in the near future and if 10 cans can be sent to the town of Tuolmne, arrangements can be made with the West Side Lumber Company to have a gasoline speeder take the fish to the railway bridge and be planted in the North Fork several miles from any wagon road and where the stream is heavily fished."

Wives and Partners.

Is the amount of work done by the wives of Forest Rangers fully realized and equally appreciated?

Three years ago, after a strenuous fire season, I thought it desirable to draw the attention of the officer in charge of the Forest on which I was then located to the very valuable assistance and work contributed by my wife during the fire season, thinking that a few words of appreciation to her would not be amiss. The only response elicited was, "Oh, yes, all Rangers' wives do that."

Is it then not natural that at times one should wonder whether all the efforts expended by the wives and partners tend merely to create a record for a small number of "overhead" men, and whether the publicity given to the efforts of certain wives is not just part of a system to extend a scheme to secure two workers for every name on the payroll?

I bring up this point because I have the feeling that there must be many who are also wondering.

We here know that our Supervisor is a man who can and does appreciate to th full the work that is done by the silent partners. He has "been there"; but, there are some who have never been there, neither by intuition, nor by inspiration, nor by accident.

It surely would be helpful if we could receive from the top of the ladder a expression of appreciation that would carry at once a ring of sincerity and conviction, and afford a little encouragement that would dispel the occasional gloom tha must at times envelop a thankless task.

District 6 - North Pacific District

Forest Examiner W. H. Gibbons, of "Products", accompanied John Newland, of the Forest Products Laboratory at Madison, on an inspection trip over the more important timber stands of Oregon. Mr. Newland and Chester J. Hogue, New York representative of the West Coast Lumbermen's Association, his traveling companion, before coming to Oregon, visited the principal timber regions of British Columbia and Washington.

Norman G. Jacobson has resigned as supervisor of the Deschutes, effective August 15, shortly after which he will accompany Irvin S. Cobb and Bozeman Bulger on a central Oregon hunting trip. Mr. Jacobson entered the Service as Forest Assistant on the Fremont, July 1, 1910, and became supervisor of the Deschutes November 1, 1917. He is succeeded by H. L. Plumb, who is a graduate of the University of Michigan and has had a wide and varied experience on the Forests in District 6.

Credit for one of the best eight-mile stretches of road in eastern Oregon is given to the Forest Service by the Baker Morning Democrat. The piece of road in question is between Sumpter and Granite, on the Whitman National Forest.

Professor J. I. Lambert, of the Industrial Education Division of the public schools, Dayton, Ohio, called at this office recently to get information concernin the National Forests of the District. He was particularly interested in Eagle Creek Camp Ground. Professor Lambert intends to use the information he secured as the basis of several illustrated addresses that he will give in Dayton and vicinity this fall and winter.

Fire warnings have been posted in the smoking cars of the Oakridge branch of the Southern Pacific and the windows equipped with screens. This line, extending from Eugene to Oakridge, enters the Cascade Forest. It is much traveled by fishermen, campers, and hunters. Supervisor Macduff made the request for these fire prevention measures.

Grazing Examiner J. L. Peterson reports that forest ranges are in better condition now than in several years past. However, he says that there is considerable change in the stock business, due in the main to a "tight" financial situation. The sheep industry here seems better able to cope with the financial condition because of ownership of better winter ranches and feeding facilities than the cattle men possess.

A burnt rag and a missing twig were clues by which Ranger Lee F. Chartrand fastened the guilt of a fire on the Wenatchee Forest where it belonged. The fire occurred on a high ridge, away from the line of travel, and its origin seemed rather mysterious until the charred rag and missing twig suggested to Mr. Chartrand that some person or persons had been after wild honey, found a bee tree, smoked t insects out with a burning rag tied to a twig, and failed to extinguish the fire, which had speedily spread over the area besides destroying the hollow tree. Acti on this theory, he ascertained that two men, known locally and living six miles away, had been on the ridge shortly before the fire gained headway. He interview these men, who confessed in justice court that they had started it in the manner surmised by Ranger Chartrand. Both men paid fines.

In commenting on this case, the Wenatchee Daily World says: "The rangers are to be commended for the efficient manner in which they handled this case and it should prove a lesson to other bee hunters and forest visitors to be extremely careful with fire in the forests at this time."

Lumberman E. C. Erickson, who has just returned from the Whitman, says tha the Prairie City Box Company, operating at Dixie Meadows, 10 miles up Dixie Cree from Prairie City, on the Whitman Forest, is selling in southern Idaho, for fruit boxes, all the lodgepole shooks that its mill can cut. The Company gets its logs from the National Forest. There is much lodgepole elsewhere in eastern and southe Oregon, and its manufacture into fruit boxes promises to become an industry of local importance, the more so since the fruit regions of southern Oregon and Idaho are adjacent to the lodgepole regions.

Mr. Erickson believes the sawmill of this plant to be the smallest in Orego It is operated by a 35-horsepower boiler and engine, picked up at a mine. The mai saw is a shingle saw which does circular-saw work. The portable mill is similar to those used in France by the forestry regiments. The crew consists of five mill hands, three loggers, and a horse. One man is engineer and fireman; another performs the duties of foreman and saw filer; the third is sawyer; the fourth edgerman; and the fifth extraman. Lodgepole pine only is cut into 10-foot logs exclusively and to a top diameter of four to eight inches. Fifty logs make a thousand feet. The output is about 4 M. per day. The shooks, four to six inches in width, are cut from half-inch lumber.

District 7 - Eastern District

There is a possibility of small water power being developed on Wilson Cree in the Boone Forest. One application has been pending for more than a year, while a second was filed a few weeks ago. The delay in either applicant's obtaining a permit is due to the fact that the sites chosen are located on a portion of the Caldwell Land and Lumber Company's tract which must be condemned in order to perfect title. One engineer states that if his company's application is granted the project contemplated will require two years to complete. The total horse power will be 500 to 750.

Another development already under way is a new 5,000-spindle cotton mill at Mortimer, N. C., on Wilson Creek. This company will utilize steam power at first, but later on plans to develop water power near by, a portion of which may be located on Government land near the falls of Harper Creek.

The mill will employ about 150 hands. This, in time, means a population of about 400 for Mortimer. Mortimer has been desolate since the sawmill of the Ritte Lumber Company was moved away three years ago.

All of these projects mean more life to the Forest, and they mean also that the chief artery of transportation to the Forest, the C. & N. W. R. R., will not be abandoned. This railroad has its terminus at Edgemont, two miles above Mortimer. Furthermore, the new mill will give Ranger Coffey new neighbors and additional interests to look after.

This season's piscatorial record on the Pisgah demonstrates fully the theor held by many observers, namely, that there are two kinds of fishermen: One kind i cludes those who really want fish when they go out with their fly and rod and a few dollars worth of permits. The other kind go out for the purpose of getting away from business cares. They love the streams for their beauty and not because fish inhabit them. They had much rather listen to the song of rushing water than hear the gutteral sounds of a speckled trout. They had rather talk about what fun they had than about the number of fish they have caught. They are purely recreati loving men and women, and are not peeved over poor luck. The professional class has less good nature. If they pay for a permit to fish they want said fish to be in said streams and to be like Babe Ruth, the King of Swat; in other words, to strike a home-run every few minutes. Most good fishermen quit fishing when fishing is poor. Most poor fishermen use the rod as an excuse to try again in order to get away from dull care.

The shortage of paper pulp and its high price is being to some extent reflected in the utilization of certain species in the southern hardwood forests. Maple, birch, and black gum for pulpwood are bringing about the same price as chestnut for acidwood. A year ago neither of these species was merchantable for pulp. Even now they do not sell well on the stump, the price received by the Forest Service averaging 25 cents per cord; but that they sell at all is encouraging. It is merely one more sign that, before many years have passed, the Eastern National Forests can dispose of the product of their arborescent species, as well as a good many of the shrubs.

The final field work in connection with the transfer of the title of the remaining portions of the Vanderbilt Tract has been accomplished. Examiner of Surveys Denman has been out with the appraisers assisting in the location of the boundaries.

A recent letter from Mr. Gravatt of Bureau of Plant Industry, who has been on an inspection trip in Virginia and North Carolina to try to determine the spread of the chestnut blight, tells us that he has found it in eight counties in North Carolina and that he has no doubt it will be found in additional counties. He found one tree in Avery County, near Linville Gap, which had been affected with the blight for three years. This is within the Boone Purchase Area. No inspection has yet been made of the chestnut in the Forest. Forest Examiner Yarnall will soon make a trip over there to investigate.

Mr. Gravatt states that the disease has spread much more rapidly than he had previously predicted it would.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

August 30, 1920.

OUR FORESTRY PROGRAM - III

Address of Colonel Greeley at the Conference on Reforestation
held at Madison, Wis., July 23, 1920.
(concluded from last week)

My theory of State legislation, which I simply put up as a target for you fellows to shoot at, is just my idea. I don't want to appear to stand up here like Moses on the Mount and hand down commandments on stone tablets. My idea of state legislation is that you don't want to attempt too much in your law; that you have got to put your confidence in a commission, or a board, or some form of state authority dealing with forest questions that will have authority behind it in the laws of the state to determine what is necessary within reasonable limitations; to apply these regulations and requirements to the private owners of the state subject to some provision for appeal, or review, in cases where an individual private owner feels that the state commission has been arbitrary or has exceeded its authority.

I would authorize that state commission, let us say, to do several things. I would authorize it, in the first place, to establish a sufficient fire protection organization to control the fire situation of the state; with a sufficient appropriation to carry that out, but with the provision that every private owner who benefits from that protection must contribute a fair and proper share to its cost. I would authorize the commission to levy the cost of fire protection upon the lands of private owners who will not contribute voluntarily - to make that a lien upon the property; but I would put, probably in the law itself, some limit as to cost per acre, some equitable limit, beyond which your commission cannot go. The commission might work directly with the individual private owners; it might work with associations of private owners, as it does in Oregon, where in any county, under the existing state law, if the majority of the timber owners agree upon a scheme of fire protection and determine upon a pro rata cost per acre, every private owner in that county above a minimum acreage, has got to participate within a limit of cost, the amount fixed by state law. I think it is about five cents per acre. The tax collector takes care of it. The commission furnishes the skilled organization, the overhead of permanent rangers, and the private owners furnish the cost of patrol. Where these associations are established, the protective machinery is very largely handled by them. That seems to me to be one form of state organization where that principle of the participation of the private owner represented by the whole state is carried out on an equitable basis.

I would authorize that commission to deal with the question of slash disposal in the same way, giving them authority to prescribe the methods of slash disposal applicable and practical under this and that set of conditions. Don't limit them in the law to details; limit them as to a total cost; put the protection to your timber owner in that form; put some total cost limit, 50 cents per thousand, possibly less, depending upon the requirements of the state, and let that commission with the forest officers employed by it, with the assistance and cooperation of the lumbermen and timber owners, work out the practical and the best way to spend that amount of money in reducing the fire hazard on forest lands. I don't see any way to do it except by some such method. Third, I would give the commission authority, subject to appeal, to determine what other method should be employed in the way of restrictions in cutting timber in order to actually prevent the devastation of the forest lands of the state. I would make that commission non-partisan in character. I would provide definitely for the representation of other interests in the state upon it, in accordance with whatever the best arrangements may be in each state, to get a representative non-partisan commission that will hold the confidence of the public and the state. That is the first and biggest feature, in my judgment, of any effective state forestry law.

You may not be able to get all of those things done at once and I don't care particularly if you don't. If you could only get that fire proposition through so that every state would be in a position to carry out a really effective scheme of fire protection, everybody taking a hand in it, and I hope that the Forest Service with its million dollars behind it, in ten years, will really be getting forest growth to show for our efforts, that is the big thing.

Now I would follow that, in outlining a complete or ideal state program, with some provision in each state, even on a small scale, if necessary, for building up state forests.

Personally, I cannot agree with the proposition expressed by Gov. Philipp here yesterday, that the duty of growing timber is entirely a duty of the national government. It is a duty of the national government and the government should go at it but it seems to me that it is a responsibility that the states also share. It seems to me that Wisconsin, Minnesota, and Michigan have an obligation to their own citizens, to their own welfare, their own future taxable property, and future industry to take an active hand in this proposition of growing timber. I am for state forests as well as federal forests. How fast you can go in that direction will vary, depending on the different states. Some eastern states are going at a rate that I never dreamed possible. It is a question of finance; it is a question of constitutional limitations; it is a question of public sentiment. I would say, everywhere, make a beginning if you can. I would also do this: I would go at this question of receded tax land and I would provide, under constitutional limitation to private owners, that every piece of land that comes back to the possession of the state from non-payment of taxes should be classified by some competent authority and if it is classified as forest land, that then and there it becomes a part of the state forest land.

The third point is the question of taxes, upon which the only suggestion I can make is one of investigation and publicity through the designation of a legislative commission. There are a good many other things that would be desirable in this or that particular state. I have not touched on state nurseries and I think that it is important in some prairie states to go into that phase. The things which I have mentioned are the essential things.

There is only one way to get this program accomplished - the federal program which will probably come up in the form of a specific bill at the next session of Congress, and your state program,- and that is by everybody taking hold of it; by creating a public demand for this kind of legislation that Congress in Washington will have to recognize; and that your state legislatures in the various states will have to recognize. I want to see the men and business interests who are most directly interested in this take the leadership in this fundamental public task. The American Pulp and Paper Association has already formulated and approved definite forestry proposals, many of which are quite in line with what I have outlined. The National Lumber Manufacturers Association, through a Forestry Committee, which recently held a meeting in Chicago, has also formulated a set of principles and certain proposals for federal legislation which represent, by and large, an advanced position, a creditable position, for that industry to take.

It seems to me that all that we can add to the consideration of these questions, all the support and impetus we can put behind this proposition, means that we will get a definite result that much sooner; and I would like very much to see the interests represented here take some action which will enable them collectively to give the proper consideration to these proposals and to other proposals, to go into it to any extent that they think necessary, and to be prepared when the proper time comes to make their voice and their influence felt.

Should We Stop Scaling Logs Long Enough to Put Out the Fires?

The editor's comment preceding Mr. Barnes' article in a recent number of the Bulletin, and Mr. Carter's "answer" have served to give a different meaning to that intended in the report by Reed and myself. I am sure that those who read the report carefully will agree with me that it contains no recommendations either for dropping the annual grazing reports or for selling more timber by estimate. The report only raised questions as to the desirability of continuing present practices regarding these activities. It was not written for controversy but for the purpose of starting consideration of the whole subject of our ability to carry on the work as in the past. I do not pose as an expert in either grazing or timbersale management and would not presume to advise either Branch on methods by which the work should be done

It has been my job in the past to contribute what I could towards shaping an organization that could, with the funds available, do the work as the productive Branches felt that it should be done. Opportunity was afforded this year of sitting in at three allotment conferences between Mr. Headley and District office men and learning something of the financial situation in Washington. That experience raised grave doubts in my mind as to our ability to carry on all the work in the way we have been doing it in the past, and what I wanted to bring about was a Service-wide consideration of the subject.

Today I heard a supervisor say that some things that were a necessary part of an adequate protection program had not been done because of the pressure of timb sale work, and a District Forester and two Assistant District Foresters who know the conditions agreed with him. The Supervisor's name isn't Harrington Emerson. If it were he might have found ways to do both the protection and the sales work. But he is a hard working, conscientious supervisor who knows his Forest and his conditions and he is doing the best he can. He has no ready made solution for handling all the work to his own satisfaction, and none of us at the conference hac one to give him.

So we are faced with this fact: The timber was scaled and the grazing report was made, and some of the protection work wasn't done, and the Almighty did send lightning that set fires and the fires burned timber. Now, what are we going to dc about it? Mr. Carter, of course, doesn't mean to say that we should scale logs eve if timber burns while we are doing it. But, if I get the tenor of his contributio correctly, he does say in effect that he has given some authority to District Foresters to lighten up on scaling work and if the field force doesn't do it it is the fault, not his. In other words, he puts himself rather on the defensive in the matter. I contend that if every stick of timber sold by the Forest Service in the pas three years had gone without scaling, and we had thereby been able to lessen the fire loss by one-half, we would have been practicing better forestry. I do not say that if we had not scaled the timber this saving in fire loss would have resulted, but what I do hope is that everyone will stop and take stock of the situation and see what he can contribute towards solving it.

The mere fact that the force has more work to do is no assurance that more work will be done. Neither is the question solved by an admission that we should be more efficient. It takes time to increase efficiency and fires don't wait for time. It should go without saying that if a man has a choice of meeting a fixed requirement, such as making a grazing report, or scaling logs, or taking a chance on such a job as patrolling for fire, or riding a range, he will take the chance if he sees a reasonable probability of getting away with it, and it is taking these chances that is likely to get us into difficulty.

It must be remembered that we have had pretty definitely fixed policies for a long time. If we are going to change those policies it will take the same vigorous action on the part of the men in the higher positions that it did to start them. Again I want to say that I have not recommended discontinuing scaling or grazing reports or anything else, but I have looked into the books and found a deficit of at least 25 per cent in available resources when compared with the work to be done. For the sake of argument, it is agreed that we ought to be 25 per cent more efficient than we are but that doesn't make it so. If all the work isn't done that having the least fixed requirements will be slighted. Can we afford to proceed on that basis?

FRED MORRELL.

Headley Says Scale Logs and Stop Fires Too by Cutting Headquarters and Office Time

The memorandum of Mr. Morrell and Mr. Reed was not prepared with the slightest idea that it would be given publicity in this arena and, as Mr. Morrell says, the way it was handled by the editors, and others, gave it a different twist from that originally intended. Apologies are due them for the liberties taken.

I do not believe, however, that we need to regret controversies of this kind. Unless I am badly mistaken, controversy with good humor furnishes the environment which must be supplied if our individual and group thinking is to maintain a proper level. Controversy with good humor makes for high thinking and free speaking, and I think it will lead to that with a number of our subjects which hitherto have been held largely within the purview of those who sit in seats of administrative authority.

Although as an organization we have always wanted to be democratic in our methods, we have, as a matter of fact, always been rather autocratic. Without realizing it or intending it, the big "I" has had a good deal of emphasis. I well remember how many of my co-workers in California gasped with horror when I suggested a systematic method of giving rangers a voice in the selection of their supervisor, and of giving supervisors something to say in the choice of their District Forester. Most of us then and now, I venture, leaned strongly toward the efficiency of autocracy. Be that as it may, I venture to assert that we will go farther in the long run if we acquire the habit of threshing out our problems publicly (within our Service Public, I mean), with all interested members as spectators and participants. If that habit will not make for mutual confidence, abiding interest in our great enterprise, and true enthusiasm for the game, then I am entirely off the track and going in the wrong direction. This is bound to mean controversy, because only lady-like men who have no particular views can discuss live topics without controversy. But controversy may be good-natured even when hot. May we not aspire to controversy with good sportsmanship -- hard blows, never below the belt, and always with a grin?

The absence of open controversy does not necessarily mean absence of bitterness. On the contrary, I suspect that open controversy with even a fair measure of good humor constitutes a safety-valve which will decrease the meaner emotions that sometimes attack even foresters. Moreover, it is easy to cite instances where the absence of the controversies that are certain to flare up when there is frank discussion and free expression of critical opinions has resulted in stagnation that was worse than any controversy could be.

Mr. Morrell urges that we stop and take stock of the situation and see what we can contribute toward solving the problem of handling increasing work and decreasing funds. I have the following to offer:

I believe that Mr. Morrell is entirely right about the necessity of vigorous action from Washington if fixed policies or fixed habits are to be changed. It seems to me that one principle which should have general recognition is that if you find anything wrong in the Forest Service you may, if you trace it far enough, find that the final responsibility lies with the Washington Office. If there is something wrong, the man immediately responsible is only partly to blame. The rest of the responsibility is scattered all along the line clear up to the Forester. Usually any one of a number of men from the Forester down could have prevented the wrong thing if he had had the training, or the method, or the vision, or the backbone, or the information.

It must surely be admitted, though, that it is a new situation when Washington is called upon to exert its pressure to induce the Districts to use the authority already granted to them. The Washington office must not only authorize decentralization but must urge its application, it seems. We ought to recognize that this situation is contrary to the popular conception, and that perhaps the fault of the Washington office lies not so much in failure to delegate authority as in failure to see to it that this delegation is used and extended.

There is one aspect of the deficit to which Mr. Morrell refers that should not be lost sight of at all. I know that Mr. Morrell does not overlook it, but I want to take this opportunity to emphasize it more fully.

Sitting in allotment conferences one comes to believe, as Mr. Morrell implies, that time and funds have been stretched as far as they can be made to go. It may be profitable to check ourselves pretty closely on that point. One inspection report recently has shown that during the months of May and June, 1920, practically all of the time of the rangers on one Forest was spent at their headquarters. An inspector, returning to Washington from the field, reports a very great decrease in the amount of work done on such things as trails, boundary marking and signs. His best judgment as to the reason for the decrease of this kind of work is an unnecessary amount of time spent at headquarters.

An Assistant District Forester, writing from the field to his District Forester, recently said: "What can we do to get field men to send out or post our campfire posters, sent out last spring? These are dandy posters, but I find most of them laid away at the supervisors' and rangers' offices." Mr. Morrell himself, in a recent issue of the Bulletin, has pointed out how small a proportion of our total time goes into productive field work.

Suppose we drop the propaganda habit of mind for a moment and ask ourselves whether these facts (which are by no means extreme or isolated ones) are consistent with the statement that we have more work than we can do with the men and money available. There is here and there a man who is proving by his work that more can be done. (Also, there are effective men who are overloaded). It is not a question of any hifalutin' system of efficiency, in order to accomplish the comparatively favorable results that some men are accomplishing, it is merely necessary to take stock of the situation, face facts honestly, and do something about it.

It has not been the fashion in the Forest Service to place any confidence in the methods and habits of mind which are so much used in making the modern business and industrial world most productive. One evidence of this is the fact that even our Manual looks with disfavor on the serious use of the diary in judging a man's efficiency. It is said that a good man seldom shows in his diary what he does, and that therefore his efficiency should not be judged by this record. As a result, it often happens that a man is judged by a snappy answer to a question, or on a good letter he has written, or on the best foot that he has put forward in company, rather than cool measurements of the quality and quantity of his accomplishments. It is true, of course, that a diary shows in the large, if not in detail, what a man was working on, how long it took him, whether he was at his headquarters or in the field, what methods of travel and work he followed, and it should show a good deal about what he accomplishes. It is often about the only available gauge of personal efficiency. But the use of diaries, in efforts to ascertain and raise the effectiveness of our work, has been rather frowned upon because, I am afraid, these diaries had a habit of disclosing unpleasant facts, and we did not have quite the inclination to face and deal with this kind of unpleasant facts.

I think the responsibility for the tendency to frown upon the use of the diary and associated methods of control of work rests with the Washington office, and I do not believe it is reasonable to expect much change until it is recognized that Washington takes a different stand.

Speaking for the Branch of Operation, I want to recommend the diary, and similar records of the use of time, as an open door to a world of neglected opportunities to make our dollars go further and our ambitions come nearer. I hope that the Administrative section of the Manual when rewritten will reflect that point of view.

Again, speaking for the Branch of Operation, I want to recommend for general use and method of administration which records, both in the large and in detail, just what the individual or the unit wants to accomplish; which estimates as closely as experience and skill permit the amount of time required for each accomplishment; which allots the available time of the individual to the tasks that impartial scrutiny has shown to be most important; which recognizes and enforces on self and subordinates definite standards of performance; which ruthlessly demands of self and subordinates that things get done according to the schedule previously decided upon; which constantly checks and welcomes checks, through diaries and in other ways, to determine the relation between the expected and the actual performance.

ROY HEADLEY.

Don't "Ostrich" ----- Face It!

The recreational use of National Forests is one that has joined the Forest family to stay. It is with the Forest Service whether the Service so wills or not. It is a short-sighted outlook that does not recognize this and start right now to plan for the recreation resource.

A situation which seems to be now present in some quarters is a very intense demand for recreation on Forests with the Service at those points unready to meet it. What is more, this unpreparedness is going to increase in all Districts unless action is taken to handle the recreation problem in as good a manner as has been done in the case of forest management, engineering, grazing, and other specialized lines of Forest work. A flood of recreational users is bound to come to all Forests, and unless the Service is ready to meet the issue and handle it there is going to be infinitely more damage done the Service than some would have us believe has been done by advertising something we haven't got. We have, in fact, almost unlimited opportunities for recreation, and the one thing we haven't got is not recreational territory but good and adequate planning for these areas.

A significant question is "Where is this demand for recreation coming from?" The answer should attract the attention of all who are interested in the advancement of forestry! It comes from the great mass of people of the Nation and not from any one group.

For years technical foresters have been trying to awaken a general interest in forestry throughout the Nation. The response has not been what it should be, in view of the tremendous significance of forest products in the economic life of the country. The reason is that most people have no personal and direct interest in any forest area. They benefit from watershed protection but, not knowing the principles of this protection, never give it a thought. The importance of the forest cover on a watershed does not strike home to them. They all get their water from a faucet somewhere and beyond this they never inquire. Beef raised on the Forests may be served on their table, but the majority of people never think of the great grazing areas that produce this beef; they get their meat from the butcher and there their interest stops. The lumber they use in building homes may come from their own National Forests, but they get it through the local lumber dealer who probably does not know the source of supply himself. In all of these older established uses the benefit of the Forest to the individual is indirect, and the Forest holds a vague sort of position in his mind. These same people, in direct contact with the Forests would become vitally interested in all of these activities, and the great National policy of forest work that is so ardently desired by all foresters would soon be an accomplished fact. The great mass of public opinion would demand it.

Stock growing, timber utilization, and all of the other older established uses of forest land can never be entered into by the bulk of the citizens of the United States in a direct way. There is not sufficient forest territory to allow it. Recreation, however, does afford the opportunity for putting all people directly and personally in touch with the Forests and gives to each a vital and personal interest in all forest work. The recreational use of the Forests is the greatest opportunity that has ever been offered the Forest Service to put over the entire forest idea to the greater public. Each person in the country is a prospective user. Each userof the Forests comes in personal contact with all lines of work.

The best way to sell your goods is to have the buyer see them. The one great use of forest land that will bring to the aggregate customer enthusiasm for forest protection on the ground is recreation. If only for this one reason, the Forest Service should get right down to brass tacks at all points and recognize this opportunity for universally popularizing the Forests, and, even if at a financial loss for a short period, get going on a comprehensive and well-ordered organization and utilization of the recreation found in our National Forest lands.

The important thing is, however, that there will be no financial loss. Each district "unquestionably has a number of areas .... which are suitable for summer home and camp sites." Suppose that three small Forests, averaging 300,000 acres, could have one-twentieth of one per cent of such land devoted to summer-home use. This would mean at least 450 summer-home areas. This is not a very big percentage of the entire forest area of 900,000 acres, but it would mean at least a yearly income of $4500.00 in the District in which these Forests are located. That money received on one-twentieth of one per cent of the land in three small Forests would hire a competent landscape architect as recreational engineer for that District; and if the same ratio would hold for other Forests of the District, the landscape architect would justify himself on an absolutely financial basis.

Leave out the consideration of putting great aesthetic wealth within the reach of the people; leave out the increased health of the Nation that would come from a popular use of the Forests for outdoor recreation lands; discount the moral obligation that is imposed on the Forest Service to return to the people of the country the greatest possible aggregate use of these lands; sweep off the board every consideration of the idealistic, the aesthetic, the moral obligation that the people have a right to impose on keepers of public wealth, and look only at the most selfish side of the recreation problem in the Forests:

Forest people are interested in getting more general support of the Forests. In order to do that, they must have a great popular backing. It cannot be secured without a great number of people being personally interested in Forest work. Recreation can interest great masses, and the quantity and quality of recreation that the Forests offer is great. Again, a use of but a fraction of a per cent of the land in the Forests will return a real cash profit above the expense of hiring men competent to plan for and handle this use.

Stating it baldly, is it not "good business" for the Forest Service to get into the market, hire men trained as landscape architects to plan for that use which will make the Forests and Forest work popular - - - - - at a profit?

If any criticism reacts against the Forest Service and Forest people in connection with any phase of the inevitable recreational use of the Forests, it will b because of stumbling along trying to dodge the insistent demand for outdoor recreation in the Forests, by keeping "mum" about the recreational advantages found in these magnificent playgrounds, and by believing that the public will wait patiently for the Service to get its house in order so that it may take care of all comers. It behooves all members of our organization to get alive to the fact that recreation is with us to stay, that recreation offers the opportunity which foresters have been seeking for years to get the greater part of the general public back of a National movement for a big, broad forest policy for the entire country, and that the recreational use of Forest areas will not only pay its own way but return a net profit above all expenses of planning for these areas and administering them.

If an ostrich has his head buried in the sand, even he doesn't wait for an earthquake to uncover his eyes. ---------- Eventually - why not now?

A. H. CARHART.

The Fire Situation

Once more the Forest Service finds itself in a financial stringency, because of the serious fire situation in the western Districts.

The appropriation bill for the current year made $250,000 available for fighting and preventing fires. This amount has proved insufficient and the Forester found it necessary to call on the Secretary for authority to create a deficiency of $475,000, which makes $725,000 available to meet the emergency caused by fire.

Creating a deficiency means getting authority from the Secretary to use for fighting fires funds appropriated to the Forest Service by Congress for other activities. The funds so decreased are then replenished as soon as Congress makes the deficiency appropriation to cover the fire expenditures in excess of the $250,000 originally made available.

The fire record of Districts for the ten-day period ending August 20 is as follows:

Dist.	Total Expenditures and Liabilities to date	Estimated Expenditures next 10 days
1	$307,000	$95,000
2	678	600
3	15,767	---
4	13,730	5,530
5	70,000	12,000
6	63,734	35,725
7	---	---
	470,909	148,855

As we go to press, news comes that good rains have fallen in places where the danger is worst and it seems that most of the danger is over.

Beware of Linseed Oil and Cotton Rags

Recently a Ranger in District 3 packed an animal with two bales of hay on top of which he placed a five-gallon can about half full of linseed oil. En route to his summer camp the can sprung a leak, and the oil ran down and soaked everything to the pack animal's back.

Twice during the day smoke pouring from the load forced them to unpack and extinguish a fire in the heavy "suggin" used for a pack blanket. (If you don't know what a "suggin" is, ask some old-timer.) The Ranger admits that on finding the second fire they attributed it to spontaneous combustion caused by the leaking oil, although they did not fully understand the chemistry of the matter. The second time they soaked the "suggin" in a nearby stream and so reached camp without having to call out the fire department again. The Ranger unpacked his animals, stacked the saddles and pack-rigging against the corral and tied the stock up to it for the night. On his riding saddle was his Winchester, while chaps, spurs and other articles of personal equipment and adornment were mixed with the plunder.

About midnight the men were awakened by several shots and looking from the window of the station discovered that the corral and pile of saddles were burning merrily and the flames were just about ready to begin operations on the horses and the stable. The shots came from the burning Winchester.

Quick action saved the stable and horses; but the whole pile of equipment, together with the corral, was completely burned up. The fact that during the day they had extinguished two fires in the pack carrying the oil should have been sufficient reason to make the men take precautions against a further outbreak. They failed to do this, however, and therefore the Forester declined to recommend to the Secretary that payment be made for the personal property destroyed, on the ground that the Ranger did not use reasonable care in avoiding the loss and the Government was therefore not responsible for it.

It is a well established fact that under the right conditions linseed oil and cotton of any kind are like gasoline and whiskey - they don't mix successfully. If the Ranger had not received two warnings as to the dangerous character of his cargo the loss might have been considered unavoidable, but his failure to realize the need of care in preventing another fire was contributory negligence and his responsibility was absolute.

Under the circumstances the decision seems perfectly proper, as the Secretary has repeatedly refused to pay claims where the evidence has pointed to failure on the part of the Forest officer to use proper precautions in the care of the property destroyed.

WILL C. BARNES

Cutting Out the Swearing

The Acting Forester has requested the opinion of the Solicitor of the Department regarding the possibility of amending the Administrative Regulations so as not to require repeated oaths of office in changes of statutory positions as now made under Paragraph 10 of the Fiscal Regulations. Under the present procedure every change in status of a man on the statutory roll requires that a new oath of office be taken. Finding the proper officer to administer such an oath is an easy matter in most towns, but is an entirely different proposition back in the hills. Here is how District Forester Kneipp sees it:

> "Ranger Rowe is stationed at his summer headquarters. The fire season is on, timber sale business is active, sheep are just being placed on their allotments, cattle remain to be distributed properly over the districts, tourists are coming in in large numbers, improvement crews require attention, and a multitude of minor duties are pressing. To meet the situation he has laid in an abundant stock of supplies and has made arrangements to have his mail brought out by some friendly rancher, lumber-hauler or other person. One happy day he is advised that the excellence of his services has been recognized and he is being promoted on the statutory roll. He is also advised that before he can draw his pay under his new appointment, he must execute a new oath of office. He may have already executed two or three such oaths, all identical in wording and all reposing in his personnel folder, but this is immaterial.
>
> "The nearest point at which an oath can be executed is 37 miles distant. Since the Ranger has no automobile, he must make the trip on horseback, which will require practically a full day. As the work on his district is pressing, he postpones the trip as much as possible, but eventually financial self-preservation makes it necessary for him to forget about the multifold demands upon his time and he journeys to town. Perhaps when he gets there, the one lone Notary Public or other officer authorized to execute oaths may be off on a fishing trip or out on his ranch putting up his hay, or absent from town for some other reason. If so, the Ranger must await his return or journey still farther to some other Notary. Finally he executes the oath and spends one more day getting back to his district. The net result is two or more days' loss of time for which the Government pays three or four dollars per day, and also, the subsistence expense and stable costs for the Ranger.
>
> "Perhaps in his anxiety to do the right thing and not overlook any bet, the Ranger executes the oath with his full name,

The discussions running in the Weekly Bulletin, especially those from the Washington Office, are very interesting and helpful.

E. R. McKee,
Forest Ranger,
Florida National Forest.

Forest Products Laboratory Notes

The Official Decennial Program, which was sent to Mr. S. J. Record of the Yale Forest School, by some chance had no printing on the inside except the two Forest Products Laboratory seals. In acknowledgment, Mr. Record mailed it back to Mr. Winslow with the following written across the blank pages:

> "The Forest Products Lab. must have an unsuspected sense of humor to send out a thing like this and call it a "program showing in some detail", etc. - Some detail, I'll say.
> S. J. Record"

The Director received a distinguished group of visitors at the laboratory on August 19 and conducted them through the Main building.

The party consisted of Prince Carol of Roumania and eleven attaches includin the Prime Minister of Roumania, the Roumanian Ambassador to Greece, a General, Colonel, Captain, and Lieutenant in the Roumanian army.

Their names in the visitor's register form a very interesting page headed by the signature, Carol, Prince of Roumania.

The Prince spoke English well and seemed informed on the subjects of Pulp and Paper and Kiln Drying. He showed much interest in our work along these lines.

The other members of the party were accompanied by interpreters.

Owing to the limited time spent in Madison, it was not possible to visit the other buildings of the laboratory.

A telegram received from Mr. MacLean on a recent departure, ostensibly on laboratory business, read as follows: "Leave this morning for Paradise. MacLean.

It is not generally known that we are doing any cooperative work with Paradise, though Preservation of course is the logical section to handle it. Thinking it all over, the laboratory is well equipped for cooperation anywhere, either in this world, or the next. For the other Department of the Hereafter, we can offer cooperation through our Section of Kiln Drying.

District 2 - Rocky Mountain District

T. W. Norcross, Acting Chief Engineer, has just completed a trip through the District, during which he inspected a large number of road projects, both major and minor. He was accompanied by Mr. Mendenhall, District Engineer. During the latter part of his trip he was the guest of the Bureau of Public Roads in the Buick car driven by Mr. Palen, who has charge of the Forest Service major projects. Mr. Norcross was left on the Western Slope on Saturday, on his way to District 4. He seemed to think excellent progress was being made by the Bureau of Public Roads on the major projects and also that the work being done by the Service on the minor projects was very good.

Forest Inspector C. G. Smith, of the Washington Office, is examining timber sales on the Medicine Bow in company with District Forest Inspector Peirce. He is expected in Denver the latter part of this week.

Assistant District Forester Leopold of District 3 is now visiting the Fremont Experiment Station. Later he will make a trip to the Cochetopa with Mr. Keplinger and a trip over the Leadville with Mr. Granger.

The use of airplanes for fire patrol in this District will be given a test this week through arrangements made with two local airplane concerns, whereby small fake fires will be set on the Colorado and San Isabel Forests, in localities not known in advance to the pilots, who will then see how quickly they can discover the fires, make a landing, and get a report to the office of the Supervisor. In each case the plane will probably carry the Supervisor of the Forest as passenger. The chief value, at present, of these tests will be the opportunity for fire propaganda publicity, which will be beneficial both to the Service and to the airplane concerns. The latter hope, of course, either to sell planes to the Service or to make arrangements for regular paid patrol, but they understand that these are dependent on the results of present experiments of the Service in the Pacific Coast District and on larger appropriations. Meanwhile, they have agreed to have all their pilot keep a sharp lookout for fires and upon discovery of one to fly close enough to investigate, proceed to the nearest landing place, and make report to the Forest Supervisor.

Reports received from the Forest Supervisor indicate that there will be an enormous crop of western yellow pine cones in the Black Hills. The Forest Supervisor at Custer, South Dakota, reports that he has never seen such a number of pin cones and that it will be possible to collect great quantities of seed. Arrangements are being made to collect 1,000 pounds of yellow pine seed which will be use to raise trees at the Government nurseries for planting in the mountains.

There is also a bumper crop of Norway pine cones reported from the Forests of Minnesota. Crops of Norway pine seed occur infrequently; in fact, this is the first one of any size that has been reported since 1915, previous to which the crop of 1910 was the largest known. Norway pine seed retains its vitality for a much longer time than the seed of most forest trees; in fact, tests made last winter showed that 75 per cent of the seed which was collected in 1910 was still fertile.

During the past fiscal year the total receipts from timber sales in Distric 2, including Minnesota receipts which are credited to the Indian Fund, amounted to $287,446.35. This amounts to an increase of 25 per cent over the fiscal year 1918, the highest previous record. The amount sold increased 19 per cent and the value 32.4 per cent over the figures for 1918, while the amount cut increased 12.3 per cent and the value 14.2 per cent over the 1918 figures. With the increase in freight rates on West Coast material and the increasing demand for timber in the Rocky Mountain Region, it should be possible to at least maintain the record of the past year.

C. M. GRANGER,
Acting District Forester.

District 3 - Southwestern District

The net receipts of the District for July amount to $27,182.69, which is $7,000 more than a year ago, the increase accounted for entirely from timber sales

The Crook and Tonto carry off the prize with only $15 leave without pay each during the past fiscal year. Is this because of the healthful climate or because of the absence of trout fishing?

Mr. Fred Miller, formerly Ranger on the Manzano, but for the past 6 months with the Insular Forest Service of Porto Rico, has returned to the Southwest and will work as Grazing Examiner with the grazing reconnaissance party on the Apache. Fred says the Southwest looks good to him after investigating Porto Rico.

"New York Sun, commenting on Secretary Meredith's report on the timber situation (the so-called Capper Resolution report) says: 'The National Forests and the National Forest Service are an example and an inspiration to the whole country.'"

"The forest economists on whose recommendation a study of the Pinon crop as a source of revenue is to be made, might well turn their attention to acorns. The gathering of bellatas, or the acorn off the emory oak, has probably brought more camping parties to the Coronado this year than anything else. 200,000 pounds would probably be a conservative estimate of the season's harvest -- and they retai in Nogales for 20 cents per pound. Yet, only a small part of the crop is gathered. Spend your vacation on the Coronado, gather acorns, and cut down the H.C.L."

Coronado Bulletin.

San Francisco is spending $77,000,000 to perfect its water system. Los Angeles has spent $25,000,000. National Forests play an important role in the protection of the watersheds involved in these two vast projects. In this same connection, the recent water shortage which has affected Tucson has turned a large amount of discussion and attention to the Catalinas as a possible source of water much superior to Tucson's present supply both in quality and quantity. The Catalinas may enter into a new and vastly greater role of importance to the city in the years to come.

On returning from his work one evening Forest Examiner Westveld discovered a small fire in tall grass. In his mad search for tools he was able to find an old iron barrel hoop and with the aid of this and his big hobbed elevens was able horses), and preceded by a man with a halter rope in one hand and a hose in the other which he used to extinguish the fire as he walked ahead of his train. The chief trouble with the system was that the man could not walk fast enough to hold his own with the part of the population which believed that frequent burning was the salvation of the forest.

The Arkansas cut 15 million feet of timber in 1919, and their cut per man in overhead was 3,725,000 feet -- larger per man in overhead than any other Forest except the Medicine Bow. Even the Whitman figure is 300,000 feet less per man in overhead than the Arkansas. In amount cut per field man, the Arkansas is only 1,655,000 feet -- less than every other Forest except the Pike and the Targhee. This is partly accounted for by the fact that there are 94 sales - more than on any other Forest, except the Targhee. The Plumas, with 84 sales, comes next to the Arkansas.

ROY HEADLEY

New Jersey Schools to Study Fire Prevention

The State of New Jersey is going to the root of the matter in the study of fire prevention measures, as evidenced by the following, which is effective on September 1, of this year:

An Act to compel instruction in the public, private, and parochial schools of this State in fire prevention and safeguarding lives and property against loss by fire.

Course of Study in Fire Prevention

1. The Commissioner of Banking and Insurance and the Commissioner of Education are hereby empowered and directed jointly to provide a course of study in fire prevention for use in the public, private, and parochial schools of this State dealing with the protection of lives and property against loss or damage as a result of preventable fire.

The Act further provides that it shall be the duty of the school authorities in each case to arrange for the course of study and to compel its use in each school, and of every teacher to devote not less than one hour a month in such instruction.

Washington Notes

Mr. H. R. McKay, Commissioner of Forestry for Australia, called at the Washington office last week. Mr. McKay is on his way home from the Imperial Forestry conference held in London in July. He expects to spend some time in the Laboratory and will sail either from Vancouver or Portland sometime the latter part of September.

"Bobby" Reynolds has returned to Washington after a three weeks' stay at Camp Perry, Ohio, where he attended the national rifle matches as Captain of the D. C. civilian team. He brought back with him a varied assortment of medals, which attest his prowess with his chosen weapon. Incidentally he reports that probably never before was there such shooting as that done at Camp Perry. In the classic Wimbledon match, for example, a new record was set by Stokes of the D. C. team, who shot a perfect score plus a bull's-eye and a three. Two hours later this new record was broken by Lieutenant Yancy of the Infantry, who made a perfect score and followed it up with a bull's-eye and a four, thus beating Stokes by one point. Stokes, however, was awarded a special medal presented by the Secretary of War in person in recognition of having been the first man to make a perfect score in this event, which on one occasion was won by a score of 83. Reynolds won fourth place in the small bore Wimbledon match with a score of 98, and another Washington man made fourth place in the National Individual Match. The National Team Match was won by the Infantry Team with a score of 3321 out of a possible 3600 points. The District of Columbia Team stood ninth with 3240, winning Class A medals, and standing third among the state teams. It is interesting to note that none of the Western States were among the first ten teams. According to reports reaching Washington, Reynolds was widely and popularly known to the camp as "The Little Game Cock."

Formal notice has been received from the Ordnance Department that the sum of $2,000 has been made available for expenditure by the Laboratory for tests of containers, the nitration of wood cellulose, and the production of galcatan for high explosives. This money will be made available for direct expenditure by the Laboratory. Notice has also been received that the Navy will set up $80,000 for expenditure by the Labbratory. The sum of $50,000 was received from the Air Service last June for expenditure during the present fiscal year.

Dr. L. F. Hawley stopped in Washington on his way back to the Laboratory from Kingsport, Tennessee, where he went to stir up interest in cooperative work with a large by-products plant on tests to increase the yield of wood alcohol by adding sodium carbonate before cooking. It is understood that this treatment offers possibilities of increasing the yield fifty per cent, but effective only when used with small pieces of wood or with sawdust briquettes.

District 2 - Rocky Mountain District

There is so much good live stuff in the District 2 Bulletin for July that we wish every man in the Service could have a copy. In the absence of any current notes from the District, we are therefore glad of the chance to reprint here two items which are particularly worth while.

> "Keep Your Seat
>
> 'Bite off more than you can chew, then chew it; tackle more than you can do, then do it; hitch your wagon to a star, keep your seat and there you are.'
>
> "Emerson had the right idea as to hooking your little old 'ambition' cart to a star. You want it tied to a star because there are no 'fixed' stars, all are in motion, all lead outward, onward and upward. He neglected to say, however, that you should stay with the wagon. There is where most of us fall down; we won't pay the price of keeping our seats. Our enthusiasm lags; perhaps we had one or two severe jolts, jolts that have shaken a little of the 'bumptiousness' out of us. Instead of holding fast, instead of taking the bumps as lessons to build on, instead of preparing to meet a bigger bump more successfully, we let things slide along, we lost confidence in ourselves and at the next big obstacle we meet we slide from the seat. We are afraid its too big for us to tackle, afraid of the possibility of a failure, and so we quit, which is far worse than to fail, before we even try.
>
> " But did the little old cart stop? Did the star go dead? No siree! For as we tumbled out of the seat on one side of the cart, another chap climed into our place from the other side and he and the cart are still going. In short, if you are going to 'get there' you have got to keep your seat. Keep your head and your nerve, hold fast and you'll make the grade. You'll be riding the cart at the finish instead of another chap.
>
> -Brown, Leadville."

> "Why Do We Stay?
>
> "Of course it would have been very nice if Congress had seen fit to double the salary of every man in the Forest Service.
>
> "It is not considered at all likely that the above mentioned or anything like unto it will happen in our day and generation. What then is the reason men stay with the Service, or is there a reason?
>
> "Any man who went into the Forest Service thinking that by so doing he might become a power in Wall Street has, to say the least, made a mistake, but is there a man in the Service who has not at some time had an offer of other employment at a much higher rate of salary than he can ever hope to receive by remaining in the Service?
>
> "What then is the attraction that holds men in the Service at a much less salary than they can command outside?
>
> "It is the fact that loyalty to a service which has become a part of their nature makes up in satisfaction that which is lacking in dollars and cents.
>
> "It is the same esprit de corps that keeps an officer of our Regular Army in the Service year after year at a mere fraction of the pay that he could command in civil life. It is the same high ideals of service that sends the men of the Royal Northwest Mounted to the most uncivilized parts of the far North to bring back those

who have broken the law of organized government. It is the same spirit that makes the Texas Ranger face any danger and give his life rather than bring dishonor upon his organization.

"This then is the spirit that does and must govern the Forest Service if we are to maintain the high ideals and standards set by those who were the pioneers in this great work of conservation.

"This then is not to be considered a sacrifice because we stay in the Service at a lower rate of pay, as the satisfaction of being in the work one likes best more than makes up for that extra dollar we don't get, anyway success is not to be measured by the size of one's bank account; if it were, Abraham Lincoln and General Grant would both have been failures.

"It is then the duty of every one of us who intend to stay in the Service to help maintain this standard of service and efficiency which has been set. It is certainly worth while to go ahead and carry on this work that has been started, extending the activities of the Service to include everything possible whereby our natural resources may be conserved in order that when used it may be for the greatest good to the greatest number. -Armstrong, San Isabel."

District 3 - Southwestern District

"We hear considerable about the various duties of the ranger, the trying times of the Supervisor, the "bear" and "fish" stories about the different members of the Service, but very seldom do you hear anything about the poor Clerk. As Mr. Morris once said "Clerks is Clerks - everybody has them," but let us look for a minute at the Clerk in the F. S. We are not called on to measure "Forest Users' wives for corsets", it is true, but who generally has to wait on visitors and is supposed to answer every conceivable question about trees, blackleg, homesteads, loco, fires, pigs, petrified forests, etc.? - the Clerk. How about the delinquent closing reports, special uses, grazing fees? Who worries - the Clerk. How about Statistical Reports, timber cut and sold reports, financial statements, improvement inventories, property returns, forms 26, and a thousand other things - if an error is made, who is generally blamed - the Clerk. Who has to watch and correct the mistakes of rangers, Supervisors, and the rest? - the Clerk. Who gets the low wage - the Clerk. I'll say the responsibilities of the Chief Clerk come next to the Supervisor's. At any rate - WHERE WOULD THE SERVICE BE WITHOUT THE CLERK?"

Stiles - Crook.

A new predatory animal has been discovered on the Gila by District Inspector Kircher. It has been named the Super-Packrat. It inhabits fire cabins and (in the moonlight) is about the size of a bobcat. Its favorite provender is socks, shirts, and puttees of District Officers. It is a courageous beast, braving a barrage of boots with the utmost intrepidity. Further notes on the life history of the Super-Packrat will be welcomed by the Bulletin.

"While packing from Taos to the P.C.R.R. trail the pack train was caught in a heavy rain and the horse carrying the T.N.T. absorbed enough of the poison to die. Care should be taken in packing T.N.T. that the sack or box containing it does not touch the horse." Carson Pine Cone.

For the consideration of the office of Grazing: "Cattle should not be driven into the forest in the morning before the dew has nearly dried from off the grass, or else they will attack the woody plants; they will also do so in wet weather."

Schlich's Manual of Forestry.

"It is still considered good form to carry a serviceable axe or saw on your saddle or pack and cut logs or brush from the trails or remove a few rocks now and then; yes, even in 1920. Also let us not slight the humble homesteader and fail to visit him and gather crop and residence reports on his unperfected entry. Neither is it an indication of pettishness to tear down dilapidated metal and cloth posters and reclothe the trails and Forest Boundaries with new ones. The residents of the Forest like surprises of this kind and it is said that signs preserve their gloss and newness better if placed out of the direct rays of the sun.

Once upon a time it was the custom to post the boundaries of permanent range allotments and remove the obsolete ones. A clean station and care of property in your charge is still looked upon with favor by the public and visiting officers. Many more of our old customs ought to be revived and attention to these and similar details will aid in keeping your name among the "400". A word to the wise is sufficient."

After reading the D-6 challenge in the Washington Weekly Bulletin of July 19 and the description of the "Mares Eggs" found growing in certain parts of the wild North Pacific region we are almost moved to throw up the sponge. But then we may look about a bit and possibly can find a suitable bread upon which to spread witch's butter or star jelly; or mayhap a cuspidor for that spittle of the stars.

"The permittees of the Tumacacori District have made a good start in water development. Projects recently completed include ground tanks, springs boxed with concrete and piped to troughs, deep wells operated by windmills and gas engines, and masonry dams. One of the dams, built about fifteen feet high across a narrow canyon, will form a lake about a quarter of a mile long, and through a system of piping, will furnish a permanent water supply at several convenient points on the range. Ranger Thompson deserves much credit for what has been accomplished in the last two years." Coronado.

Tulliette, to Tex, Sour Dough: Why do you not use a cook book?

Tex, Sour Dough: Because Mam, all recipes start with, "First take a clean dish"------

During this fiscal year the average District Ranger has charge of 220,000 acres. There are some districts under this area, however, which require an assistant. The average area per man doing ranger work, exclusive of timber scalers, is 170,000 acres. Some ranch! and some boss! to say the least! Rangers on the Tusayan, Tonto and Datil in charge of 450,000 to 500,000 acres are cautioned to keep both feet on the ground or in the stirrups.

A traveler who has recently returned from the Tonto reports that the summer has been quite warm there. In fact, he said he saw a greyhound chasing a jackrabbit, and both were walking.

In all, 12 million acres of public domain were given to the State of New Mexico. To date 850,000 acres have been sold to pay an indebtedness of Santa Fe and Grant Counties.

About 1,750,000 acres of Institution and school lands have been sold, since June 1878. Roughly then, New Mexico's present state lands amount to 9,400,000 acres, or equal to the gross area of National Forests in the State. The receipts for Grazing and agriculture leases appear to average about 7¢ per acre, while the cost of administration is about 3/10¢ per acre, per annum. The above is gleaned from a report covering 20 months period and shows besides, receipts of $425,000 for oil leases and $26,000 for timber sold.

Why not have direction signs at trail gates in drift fences?

The firemen at Hannagan Meadow on the Apache, this past season loaded a homemade fly trap with fish heads. The local fly population reduced itself by tens of thousands as a result. Stations so fortunate as to have a trout supply available should try this stunt - but put the trap on the windward side of the house. It's obvious why the flies respond so readily.

Comes now from D-5, "Memorandum for Public Relations": most of us need a list of our own relatives - and a manual of our wife's relatives. But for the whole public the Lincoln will need a librarian just to index the volumes of its Texas relatives.

The way the allotment shortage is handled on the Luna District: The following is an interesting comparison of man power in 1913 and 1920: - 1913 Blue Hinkle Park Saddle Mt. Telephone line constructed - five men, nine days to construct approximately seven miles of line. 1920, the same line was taken down, wire rolled up, insulators all saved and wire packed to Blue Ranger station by two guards and a Ranger in 3½ days, the same wire put up on the Luna-Highland Lookout line in four days by same crew. Datil.

"The Great West:- A young Easterner in silk shirt and kid gloves summed up his ideas of the train wreck that occurred near Williams a short time ago in two words;- How splendid!"

"A newspaper man from Phoenix, reared in Chicago, arrived in Williams one day last week and did not think it proper that the Forest office should be closed at seven P. M. He also thought that since he had decided to spend his vacation on the Tusayan the Service should at least provide him with a tent, especially since the altitude of Williams affects prices.-----Why not ask for the rest of the vacational expense and make the Forest Service ideal----for tourist!"

"Four men were killed in and around Williams in one week; one a burglar at a local store, another a lumberman, either murdered or a suicide; two Mexican sheep herders of Daggs' outfit in a quarrel with ranchers over boundaries.

Folks here sure believe in straight shootin!" Tusayan.

Non-productive capital: road and trail signs stored at ranger stations.

District 4 - Intermountain District

Final action on the Pocatello Park proposition which has been pending so long, was taken May 12, 1920, when an Act was passed turning over to the City of Pocatello some 2,880 acres of lands formerly within the National Forest, for the sum of $1.25 per acre. Just what the City of Pocatello will do with this land remains to be seen. It was the source of a good deal of difficulty to Forest Officers and we were considerably relieved when it was eliminated a couple of years ago. Cache Register.

"Jim, Jim, a traveling gent,
Dropped a match and on he went,
A fire broke loose and raised the Deuce,
And a berth waits Jim in the Calaboose."
(Targhee Terrapin)

This ought to tell the whole story in every man-made fire case.

On August 18 a conversation was had with Supervisor Beam over long distance from Pinedale to the effect that certain prominent citizens of the town absolutely refused to permit him to remove the Pinedale office to Kemmerer. It was hard to tell by the sound of his voice what the said prominent citizens were doing at the time of his conversation but he evidently was having a desperate struggle. He was given full authority to move the office but the result is awaited with considerable interest.

A letter recently received from District Forester Rutledge states that he will be unable to assume charge of District 4 before September 15 and requests that Mr. Kneipp remain in the District until that date or October 1. This arrangement has just been approved by the Forester.

We all know that the points of horseshoe nails should be turned down as soon as they are through the hoof. Also we are all well aware that any extra horses standing around should be tied up. And we need not be told that a horse being shod in front should not be tied if he can be handled otherwise.

But, when there is only one shoe to put on, and we are in a hurry to get away, aren't we a little apt to drive the nails in full length before bending them over?

Ranger Quate got in a hurry last week and neglected to observe some of the rules of the game. He hasn't yet decided whether the trouble was started by the flies or by the pack horse which was loose in the corral. However, when he regained consciousness he found that he had just recently been kicked in the head, had one shin painfully barked, and an artery in the left wrist severed.

There isn't any moral as far as Quate is concerned; for he says it won't happen to him again. Nevada.

The following is taken from a report made upon one of the Ranger's offices on the Humboldt:

"It was found that Ranger Rohwer was maintaining a promise card box and several promise cards were actually found in the box. This seems rather unusual in regard to promise cards being actually found in a ranger's promise card box and Mr. Rohwer should be commended in this respect." Humboldt.

District 5 - California District

Going up! $5.50 for Sugar and $4.25 for Yellow Pine, $2.00 for Douglas Fir and $1.50 for White Fir and Cedar are the minimum prices specified in an advertisement now running for a 150 million foot sale on the Stanislaus. And if, as seems practically certain, the sale is ultimately made, it will be one of the cleanest and most satisfactory consummated in years. There will be no readjustment clause, for the whole amount is to be cut and removed within a three years period. Total receipts will approximate $525,000.00.

Fire Prevention. The State Railroad Commission has indicated its willingness to request all common carrier stage lines within the State to display in each stage a 7 x 22 inch cardboard sign calling attention to the fact that many fires have started by carelessness with someone's cigarettes, tobacco and matches and asking cooperation of passengers. The opportunity is too good to miss. Arrangements will be made to have the printing done at once so that distribution can be made within the week.

Good Work on the Tahoe. "You certainly have used forethought and originality in signing up your District," writes District Forester Redington to Ranger Sutcliffe. "You appear to have the hearty cooperation of the users of your District and further than that you appear to have a splendid fire record, which I imagine comes from your educational work."

That the life of the lookout man is not without its excitement is shown by the following telegram, which was received from the Shasta early in August:

> "Lookout house on Mount Eddy struck by lightning 6:15 P. M. August 4. Hole torn four feet diameter where phone line entered old lookout house. North corner of new lookout house torn into splinters. Glass in both houses badly broken. Lookout J. S. McClemmens knocked unconscious and on regaining consciousness the lookout house was on fire. McClemmens extinguished blaze. Black smoke was seen from Sisson when lightning struck. McClemmens came to Sisson today. Will recover completely within five or six days. 55 lightning fires set by electrical storm now under control."

The Tahquitz Peak lookout man on the San Jacinto District was, on account of illness, unable to continue his work and, for a while, it seemed that the most important part of the fire organization would be out of commission, as no suitable candidate could be found. But the District Ranger's wife, having a personal interest in the District, volunteered to fill the position. She left her partner to cook his own beans, and, clothed in khaki riding regalia, mounted a horse, and with blankets and grub, started for the peak.

Here in this lonesome lookout house at an elevation of nearly 9,000 feet, away from all neighbors and friends, you will find her on the job, day or night, scanning the hills for any smoke that may arise.

She had been on the lookout only two days when I called her on the heliograph and within a few seconds she had her instrument adjusted and flashed, "All's well - no fires in sight." Hats off to Mrs. Reindorp!

S.A.B.

Once again we have evidence that Forest Officers, permanent and temporary, are prepared to do their duty without fear or favor.

On July 6, Patrolman Joe Ozanne arrested a fair young maiden of 19 years of age, daughter of the General Manager of Idyllwild, Inc., for fishing without a license; she was fined $25.00, minimum fine, the court of J. P. Sallee, in San Jacinto.

Father has not been very cordial towards Joe since then, but we believe that he will get over it.

More Real Forestry in California. Cutting operations both in the vicinity of Hily, on the Klamath, and on private lands within the Lassen owned by the Fruit Growers Supply Company will be conducted in substantially the same way as operations are handled on the National Forests, according to S. N. Bump, the Company's Superintendent. Care with fire, including cleaning around donkeys, fire fighting equipment and adequate spark arresters, the felling of all snags, protection of young growth in logging, and proper disposal of slash were the main points covered. Superintendent Bump indicated that such measures would be undertaken beginning next season, when the Company expected to have things running smoothly. If the Company handles its lands in the manner indicated the Service should be able to acquire, ultimately, a large area of first class cut over land.

Undue Political Activity? Hardly that, but Benedict is surely an Opportunist. At least so says Judge Raker. It seems that the aforesaid Benedict, together with Judge Raker, Judge Barbour, Messrs. Redington, Rachford, Fowler et al., were attending the dedication exercises anent the formal opening of the Kerckhoff plant near Auberry, just completed by the San Joaquin Light and Power Corporation. Said exercises included the closing of the switches which, besides throwing the "juice" onto the transmission line, set off several charges of dynamite. An impromptu fire was thus started and Benedict, for the first time in his career, had the pleasure of putting out a forest fire with a hose. Immediatel thereafter he was found attempting to persuade Judge Raker to provide a special appropriation for a piping system to cover the entire Sierra Forest.

Beware the Chair - By T. F. Mac Manus.

Beware the deadly sitting habit,
Or if you sit, be like the rabbit,
Who keepeth ever on the jump
By springs concealed beneath his rump.

A little ginger 'neath the tail
Will oft for lack of brains avail;
Eschew the dull and slothful seat
And move about with willing feet!

Man was not made to sit a-trance
And press, and press, and press his pants;
But rather with an open mind,
To circulate among his kind.

And so, my son, avoid the snare
Which lurks within a cushion chair;
To run like hell, it has been found,
Both feet must be upon the ground.

District 6 - Northern Pacific District

Dr. Frank A. Waugh, professor of horticulture and landscape engineering at the Massachusetts agricultural college, Amherst, and collaborator with the Forest Service, has just concluded a month's sojourn in this District. He visited areas where the need of recreational development is most pressing,- the region of the proposed Mount Hood loop road and the Lake Quinault district, on the Olympic Forest, Washington. The Commercial Club of Hoquiam, which met with Professor Waugh, appointed a committee to cooperate with the Forest Service in preserving and developing the natural beauties of the Lake Quinault region.

The American Society of Civil Engineers held its 50th annual convention in Portland August 10-12. The Engineers studied Columbia River Highway professionally by a personal inspection trip, but found time also to enjoy it nonprofessionally. This trip included a trout dinner at Eagle Creek Camp Grounds, designed to exploit the excellence and variety of Oregon trout.

Telephone Engineer C. M. Allen has returned from the top of Mount Hood with the news that communication between there and Summit Ranger Station, a distance of about 10 miles, is now by wireless telephone, and that reports of fires will be sent by wireless from airplanes to the lookout station, and thence to Portland. At present power for the radio is furnished by a gasoline engine, but later a wind motor will be installed at the top and a gasoline engine at Summit Ranger Station.

The Santiam Forest is to be cleared of wolves, if cooperative efforts of the Biological Survey and the Forest Service are successful, Stanley Jewett, chief of the predatory animal branch of the Survey for Oregon and Washington, has gone to the Santiam, where he will confer with Forest officers and trappers regarding the wolf situation, which is said to be bad there.

For its mid-summer outing the Portland Community Service took a party of 420 members over the Columbia River Highway to Eagle Creek Camp Grounds on the Oregon National Forest, where a picnic lunch was served. After luncheon, the whole party ascended Eagle Creek Trail as far as the Punch Bowl. The party included a paralytic girl who before this trip with the Community Service had never been out of Portland. She was transferred from her automobile to a wheelbarrow and in the latter conveyance trundled up the trail by other members of the company.

Charles W. Boyce, liaison officer at Eugene, Oregon, reports two Air Service radio sets brought by Captain Smith from Mather Field and set up, one at the Medford and the other at the Eugene base; also that Lieutenant Batten has installed a radio of the same type at the Portland sub-base. As a result, the bases are receiving fire reports directly from the ships. Each ship is read for an hour at each base which it leaves. This means that constant communication by radio is maintained.

After examining 2700 acres of Douglas fir, western pine, and noble fir on the Still Creek area, southwest of Mount Hood, Walter Leve climbed Mount Hood. He made the trip alone, starting at 3 a. m., while it was still dark, and reaching the summit at 8:30 a. m.

After about 14 years in the Forest Service, R.E. Kan Smith has resigned to take up private forestry work in Alaska for a pulp and paper concern. While in the Service, Mr. Smith cruised in Alaska for several summers, and has a knowledge of conditions there which will be valuable to him in his new work. He entered the Forest Service in 1907 as a guard, and later qualified as a forest examiner by a course in the University of Washington. He invented the Kan compass altimeter, which is commonly used in this District by timber cruisers.

Forest Service bulletins are now guiding the kiln drying of the Cordova Mill and Lumber Company, Cordova, Alaska, in its efforts to manufacture flooring from native hemlock. Heretofore the drying has been unsuccessful, the lumber coming from the kiln in a very brittle condition. If these efforts prove successful, it will make possible the sale of flooring to dealers at from $30 to $40 per M. less than the present prices paid for fir flooring from Puget Sound mills. Another result should be an increase in timber sale business on the Chugach.

According to the D-6 statement of receipts for fiscal year 1920, the Tongass Forest, Alaska, ranked second in total receipts, timber sales, and waterpower, and first in special-use business. This good showing recalls that the Tongass has been practically self-supporting from its establishment.

Mr. A. H. Cousins, until recently Property Assistant at Ogden, has arrived in Portland to take the position of District Fiscal Agent made vacant by the resignation of H. I. Loving. Mr. Cousins held this appointment for eight years before he went to Ogden, January 1, 1917. Mr. Loving, who succeeded him then, is now auditor and general manager for a Portland business house.

All within an hour, Observer J. J. Jacobson and Pilot Edward Arndt, on their intended flight from Eugene to Portland, dropped 4,000 feet to earth because of a dead engine; made a forced landing, in a clover field where they struck a wire fence, tore away the landing gear and damaged the engine, radiator, and one wing; secured a farmer who took Jacobson back to Eugene, where another plane was rushed out and a new start for Portland made, with J. L. Walker as pilot. Nine fires were located. Observer Jacobson had his knee slightly injured in the accident.

District 7 - Eastern District

The first successful prosecution for fire trespass on the Natural Bridge, which has just been completed, resulted in the conviction of Fred Douglas, colored, of Alto, Virginia, who carelessly set fire to lands under purchase agreement with the city of Lynchburg. Although the prosecution was made in the name of the city of Lynchburg, the entire case was handled by Forest Examiner Sears, who collected the necessary evidence and appraised the damages. The case was tried by a Justice of the Peace in Amherst County, Virginia, and the trespasser was assessed with the damages resulting from the fire, the cost of fire suppression and the costs of the trial, totaling $51.42. Further sentence was suspended pending payment of the assessed damages and costs.

F. A. Gardner, the general utility man of the White Mountain Forest force, is starting a long tour with the Forest Service exhibition car which is routed to take in Pennsylvania, New York, and New England, then south to Jacksonville, Florida, where the trip will end in December. Such a job calls for the exercise of a vast amount of energy, enthusiasm and quick thinking (a combination commonly called "pep"); but whatever it takes, Gardner has got it.

Forest Examiner Sydney Thompson has just submitted his report on the examination and appraisal of the Augusta Wood Products Corporation tract. This tract adjoins Government land in the Shenandoah Forest and includes 34,000 acres of hardwoods. This report is the result of three months of strenuous field work of a party of six men. Notwithstanding the many difficulties encountered the work was carried through without a hitch and in a manner reflecting credit on Thompson and his hardy crew.

Bids were opened August 17 for the construction of the Three States Road connecting Walhalla, S. C., and Highlands, N. C. The Cranford Paving Company of Washington, D. C., the only bidder, submitted a bid over 100% in excess of the engineer's estimate. Mr. Cranford went over the road personally and laments the fact that he was compelled to submit a high bid as he declares that the Highlands Plateau is one of the most attractive mountain sections he has ever had the pleasure of viewing. However, his personal desire to see a good road was not reflected in his bid of $2.00 per yard for common excavation.

The Forest Service has just completed arrangements for cooperating with the Bureau of Fisheries in the development of York Pond in the Kilkenney section of the White Mountain National Forest for a brook trout field station. The Service will build a road 4 miles in length, bridging the Upper Ammonoosue River, to connect the Wentworth farm with York Pond. The Bureau of Fisheries plans an extensive development for hatching brook trout fingerlings to be used in restocking streams in the White Mountains and Southern Appalachians.

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

September 5, 1920.

The Forester Marks the International Boundary

On August 4, while in Wrangell, the Forester, the District Forester, the Superintendent of Alaskan Forests, and the writer were invited by Messrs. E. C. Barnard (U.S.) and J. J. McArthur (Canada) of the Alaskan Boundary Commission to accompany them up the Stikine to place numbers on two of the bronze posts on the Boundary. Leaving Wrangell about 4:30 A.M., in one of Alaska's famously swi flatbottomed river steamers (also in one of Alaska's famous rains) the party was soon speeding northward past the river flat where the planes in the New York-Alaska air race were to land in a few days. A fine breakfast was well served and well tested, for the good ship "Hazel" boasted a chef of parts.

About 8 A. M. extensive stands of fine, straight cottonwood began to be seen along the river banks, and continued for some 25 miles up the River and well into Canada. On each side of the valley rose timbered slopes, with here and there bold headlands jutting out toward the River, flanked high up by snow-filled ravines. About 11 A.M. the Hazel, nearing the International Boundary, nosed her way into the dense growth on the south bank of the River, a board was laid down, and the party went ashore. A fierce frontal attack on the devil's club, dogwood, parsnip, and other impenetrable underbrush was made at once. This was immediately followed by a counterattack, frontal, both flanks, and rear, by a well organized and splendidly equipped army of Alaska's famous mosquitoes. In the meanwhile Alaska's famous rain continued to fall.

Flinchingly and swervingly the job was begun, the stencils were placed, the pattern marked, the brace and bit applied. The bit cut its way into the bronze (while the enemy's braces and bits were cutting their way into us) and slowly the figures 63 came out on the monument, the words "Canada" and "United States" having been cast into the bronze on opposite sides of the four-foot post. The "mosquito fleet" continued its attack, regardless of an attempted tobacco barrage on our part. Finally, the international boundary post, heretofore nameless and unidentified, stood forth, wet by the international rain and christened International Boundary Post No. 63. It was then duly photographed surrounded by the combatants, each showing plainly battle scars sufficient to justify a brood of wound stripes.

Having attained their objective, the party retired to the Hazel, which immediately eased off and swung to the north bank of the River. Here a second landing was made. The veritable jungle of mosquitoes, devil's club and other woody shrubs characteristic of Alaska's humid climate made it necessary for the party to crawl, in true attacking form, over, under, around and through these, almost-as-bad-as-barb-wire entanglements. Some difficulty was experienced in locating the boundary post on this side of the River, and doubt was expressed that there was any post. After considerable scouting it was finally located, in a place where no self-respecting International Boundary Post would be expected. The figures 64 were indelibly marked on its face, and the party, still warding off frontal, flank and rear attacks, retired swiftly, and, it must be confessed, wet and disheveled and hardly in good form, to the Hazel. The good ship pushed off and swung out upstream, and into a foreign land!

Soon around a bend, in a clearing on the River's brink, a neat-looking house appeared, with the British flag flying in front. Here a brief but sufficient stop was made and then the Hazel continued farther into a foreign land.

Luncheon proved to be a very suspicious occasion, an international event, as it were, observed, with the proper regard for the social amenities of international courtesies. All agreed that Canada was wetter than the U. S.

Later, magnificent views were had of Great Glacier, and Popoff Glacier, the former with a front of six miles of rugged peaks, timbered slopes and the ever-present cottonwood along the River. All the while the famous Alaska rain continued to come down. After some fifteen miles into Canada, the Hazel, having in its favor the swift-flowing Stikine, literally sped downstream, reaching Wrangell about dark, -- with Alaska's famous rain still falling.

More Personal Contact Needed.

Realizing the need for closer touch between the Laboratory and the districts, the Madison Section of the "Society of American Foresters" sometime ago appointed a committee to investigate ways and means whereby the laboratory and the districts can help each other more than they have done in the past. The committee finds that letters and reports are inadequate to establish the proper contact and mutual appreciation necessary to the best results. It found, in fact, that in a number of instances there had been misunderstandings because of inability to reach a common point of view. Personal contact is believed to be the remedy, and the committee urges that a system of details to the laboratory and the districts be established to bring about the desired results. The recommendations of the committee are as follows:

"1. More frequent visits to the Forest Products Laboratory by the district foresters and the assistant district foresters in charge of Silviculture. These visits should be of sufficient duration and frequency to enable the foresters to obtain a thorough grasp of the work of the laboratory, its broad application to forest administration, and the requirements and possibilities of coordination and direction within the districts.

"2. More frequent trips to the districts by representatives of the laboratory for the purpose of gaining a more intimate knowledge of conditions in the various districts, of discussing on the ground related problems and means, and of considering the lines along which the work of the laboratory and the districts can best be coordinated and directed in order to meet effectively the needs and aims of forest administration.

"3. A definite program of details whereby:

(a) Men engaged in products work in the Districts will be detailed to the laboratory each winter if possible for a period of weeks.

(b) Each man engaged in silvical research in the Districts will be detailed to the laboratory at least once.

"4. Attendance at supervisors' and district foresters' meetings of a laboratory representative in order that the laboratory may keep in touch with the broad administration and technical problems of the districts and may present the resources of the laboratory in the light of those problems.

"5. The appointment by the forester of a committee of five members consisting of the assistant forester in charge of research who shall be chairman, two members from the district organization, and two members from the laboratory; this committee to meet annually to plan and coordinate a definite program of cooperative or related work."

An Alaskan Thriller.

After some twenty-seven months service with the A. E. F. in France, during which time he was wounded, gassed and bayonetted, Clerk George Molineaux, of the Tongass, still has his luck with him. On Sunday, August 15, he started on a fishing trip from Loring, Alaska, with four companions. They left the cannery at Loring about 2 A. M. and started to row across the Saltchuck, about 125 yards above a waterfall. The Saltchuck, it might be explained, is an inlet, alternately filled and emptied by the tides. On an ebb tide there is a waterfall of some 8 to 10 feet down which an enormous volume of water rushes. On the way across the stream one of the oar locks broke, and the swift current of the retreating tide took the boat straight towards the falls. Realizing their danger, two of the party jumped and swam or were washed ashore, a third jumped from the boat just before it reached the falls, and clung to a rock. Molineaux and Patching were thrown out of the boat when it capsized after striking a rock, and both went over the falls. Patching must have struck his head on rocks as he went down for he never came to the surface in the whirlpools below. Molineaux was whirled around and around in the boiling water, and eight or ten times he was brought up to the surface on the edge of one whirlpool only to be sucked under by another. All the while he fought desperately to keep himself above water and to get out of the whirlpools. Finally he was swung out on the edge of a whirlpool against a fish net, which he seized and worked himself, hand over hand, to shore, where he lay for over half an hour exhausted. He had had on high-top rubber boots but during the time that he was in the water he had lost these, and after recovering he walked a mile and a half in his stocking feet to the cannery. A boat was immediately sent out, and the two men on shore above the falls and the third still clinging to the rock were rescued.

Molineaux was black and blue all over but otherwise unhurt, while the other three men were uninjured. The body of Patching has not yet been found.

Fixing Forest Service Standards.

During the past school year the teaching staff of a State institution was directed to report on absence for a holiday, taken without permission, by the students. One instructor, striving to shield three students in his class, did not report as directed. He was called to the administrative offices, paid in full, and told his services were no longer desired because his standards were not high enough. In all other particulars, his work was satisfactory. Thus a man, well fitted by education, training, and experience for the work he was doing, failed. If he is a man in every sense of the word he will profit by this experience and finish and may even win a place.

It is unfortunate that this man did not recognize the qualifications so necessary in his character to succeed in the institution. In a similar way many good men are failing in our Service because they do not thoroly understand what is expected. Every executive officer stresses certain points which distinguish his administration from others. Consequently, the Forest personnel (and the public) is frequently adjusting itself to new standards. The supervisory officer is not to blame. It is a question of standards.

Current literature is full of the discussion of the way so-called successful men have advanced. As I read, in nearly every case "adjustment to the standards of the institution" is the key. It is adjustment to standards just the same when the man raises the standard of the institution to which he has come. Too many Forest officers are blindly plodding ahead. They are good men, hard-working men, and conscientious. They do not advance because of their lack of adjustment to standards.

The Forest Service standards are too often the result of individual interpretation on the part of administrative officers. Public service, esprit de corps, fighting for a principle, etc., are fine terms when properly interpreted and applied to the day's work. An iron clad rule would be the other extreme.

A comparison of units of work is a good start. It will form the basis for properly estimating the value of what I think is more necessary. A man may get a great deal done, may be a slave to work, and yet when working with others or directing men and meeting the public secures no cooperation. Some men cannot watch details yet are very successful leaders because of their enthusiasm and energy.

Therefore, I would emphasize the third portion of Mr. Morrell's outline (Bulletin of July 19). Select representatives of the types of men we have and ask for their ideas of the qualifications of a Forest officer. Do not try to build a composite man. That would be a grievous error. After study, criticism, revision and full publicity, a "fairly comprehensive definition" will be had. The men of the Service will know what is expected. The "boarders" will be eliminated. The majority of the misfits -- they are found in every line of endeavor -- will realize their position without being told, change their actions, or make room for qualified men.

THE QUALIFICATIONS OF A FOREST OFFICER are of first importance.

Dwight S. Jeffers

British Empire Forestry Conference.

During last July there was held in London a forestry conference, which was attended by delegates from all parts of the Empire, and which may result in the adoption of a definite forestry policy. The destruction of forests in the United Kingdom during the war for military purposes and the dependence upon overseas supplies have led to extensive reafforestation plans and given stimulus to governmental action toward securing a scientific forestry policy. Concrete proposals made at the conference were as follows:

(a) The definition, where this has not been done already, of forest policy in a forestry act or ordinance.

(b) The reservation for the purpose of economic management and development of forest land under conditions which prevent the alienation of any which is primarily suitable for forests except for reasons consistent with the maintenance of the forest policy as a whole.

(c) The assurance to the forest authority of funds sufficient to carry out the accepted policy for a series of years.

(d) The grant to members of the forestry service of the status of civil servants with due provision for pension.

(e) The appointment as the chief officers of the forestry service of persons having a high standard of training in forestry, their selection and promotion being by merit alone.

(f) The appointment of an officer, or officers, having duties of advising as to forest policy and surveying its execution.

The conference suggested also legislation for the formation of an Imperial Forestry Bureau, upon which, it was believed, the proper development and conservation of the forest resources of the Empire will depend. The conference also approved, in general, the formation of a technical corps of forest officers and foresters as well as a scientific research bureau and a central authority where the various forest products of each unit in the Empire may be studied in connection with the local policy or in correlation with the Imperial policy as a whole.

Can you Beat this 1920 Record?

The Clearwater Forest came through the season with somewhere around 178 fires, $23,000 F. F. expenditures and 2600 or 2700 acres burned over.

The following is a comparative record of the Clearwater for the past five years:

Yrs.	No. of Fires	Area Burned	F.F. Costs	G.E. Allotment	% Class C. fires	No. Class C fires
1916	40	81	93	20,643	None	None
1917	17	886	23,592	23,000	23	4
1918	90	19,313	167,851	29,178	30	27
1919	111	179,810	208,757	47,507	28	28
1920	176	2,700 (approx.)	23,000 (approx.)	38,885	5	9

No men were employed on an hourly basis. All men were paid by the day. There was no labor trouble.

Greatest number of fires starting in any 10 day period was 55 between July 10 and 20. Forty-three started during the three periods of July.

It looks like a bumping good record. It may be that the trail crew or crew idea which has been developed on the Clearwater will pull us out of the hole in fire protection yet.

Supervisor Hamilton certainly changed the looks of the Clearwater record during this past season. To him alone I believe is due the credit for the pep and vim of the organization and the high comparative success of the season's work.

The local force swear by him.

Kelley.

How Many "Field Days" Do you Put in?

A survey of the Weekly Bulletin for August 9th will doubtless cause many ranger readers to give special attention to the article entitled "What is Your Time Worth". It appears that statistics of District 2 show that district rangers there spend only about 100 days a year in the field. While this is not a criticism of district rangers in other regions, still the fact that the article is published in the Bulletins would seem to intimate that some one thinks that all district rangers would do well to check up the time they spend in the field.

Being a recent graduate from the ranger force of District 7, I feel qualified to defend my associates from an implied charge of ill-spent time. What I have seen of the district rangers of the Purchase Area Forests leads me to believe that they spend considerably more than 100 days per year in the field. Of my own Forest, the White Mountain, I can speak with assurance, though I am too far away from the data to furnish figures. I am willing to wager that either of the three district rangers of the White Mountain National Forest consistently averages at least 200 days per year in the field.

I differ from Mr. Morrell's definition that the days spent in the field is the proper measure of productive time. In 1918 a certain district ranger on the White Mountain had 142 separate sales, small ones of course, in his district. I contend that a large part of the office work in connection with these sales was productive work. They made the ranger district practically self supporting any way.

On the White Mountain Forest it has been the practice for district rangers to submit a carefully worked up plan for the season's improvement and maintenance work. I believe much of the time spent in perfecting this plan is productive work for a well planned job or a well laid out month's work is time and money saved.

It will be interesting to know if district rangers generally spend as little as 100 days per year in the field.

K. E. Kimball.

"Some Sarcasm."

The following letter, dug up by Scaler Frank W. Mattson, in the records of the Whitman Forest, gives a slight idea of the feeling which existed in the early days toward the Service. With the exception of the names, the letter has not been changed.

"Hard-Boiled City, Oregon,

January 26, 1907.

To The
Right Honorable Forest Supervisor, Esq.,
Lord High Protector of the Wilderness and
Chancellor of its Resources.

Most Esteemable Sir:

Some time ago I addressed to you a letter requesting the privilege of procuring wood from the forest for fuel.

I came into this region recently, and have not fully learned the customs of the people, or the land; but I am informed that I have not the privilege to cut a tooth-pick from a place of decaying drift wood without a special permit from your Royal Highness.

Now I do not quarrel with your customs, though they be diverse from all peoples, but I sincerely desire fuel.

I know of a tree, both high and ancient, which has ceased to respond to the caresses of the rain and the sunshine, whose leaves are withered and fallen to the ground, whose branches are bare and distorted, whose roots are loose in their earthen sockets, and whose lofty trunk sways pathetically in the chill, congealing breezes.

That this venerable pile may not fall into unhonored decay, but may be respectably cremated, and incidentally that my family may have the necessary means for cooking their simple meals and warming their humble apartments, I respectfully but earnestly petition your Excellency for the privilege of removing the aforementioned timber from its present site, which is on a slightly elevated point of land two miles southwest of Hard-Boiled City, to the land adjoining my president residence, where it will be duly cut into convenient form, and treated as above indicated.

Or if I may not have this tree, or some other tree, or at least some broken branch from off some solitary stem which is doomed to swift and certain decay, please advise me where and how and when I may procure an empty box, a broken chair or a bit of brittle straw, lest my family and myself come to grief through lack of fuel.

I enclose herewith a stamped envelope addressed to myself, and a sheet of paper whereon you may ascribe the magic words which will at least enlighten me.

I am, Dear Sir,
Your Obedient Servant and Loyal Subject,

Jimmy Come-Lately,"

Weeks' Law Purchase Areas in Pennsylvania.

Mr. Sherman recently had a conference with members of the Pennsylvania Forestry Commission to determine their attitude toward the inauguration of a policy on land purchased under the Weeks' Law in Warren, Forest, Elk, McKean and Potter counties, Pennsylvania. Mr. Sherman found that Pennsylvania authorities were in thorough sympathy with the proposal and can be counted on for all possible help. It developed, however, that the present enabling act of the State will probably have to be changed before purchases are considered, as it contains a provision which would permit the State to reacquire at cost, plus interest, any land which might be purchased by the Government.

The proposed purchase area extends also into Cattaraugus County, New York. No definite expression of opinion has been had from the New York Forestry officials, but it is expected that they will favor the movement.

Will We Stand for This?

A recent study of the titles which are to be used hereafter, as a result of the Classification Committee work, if the thing goes through, indicates the possibility of losing some of our picturesque and well known official designations. For instance, it is proposed hereafter to call Rangers by the somewhat fatherly title of "Senior Aid" and Guards "Junior Aids." Everybody knows what a Forest Ranger is and what duties he is expected to perform and it is possible that as a "Senior Aid" he may make as good a showing as when a Ranger, but can you imagine trying to work up a forest fire story by beginning it thus: "The 'Senior Aid' plunged valiantly into the thick smoke, a 'Junior Aid' at his side."

The other titles, while not so objectionable from this point of view, do not seem to me to give either the public or the men in the Service an indication as to what the men's duties are. For instance, it is proposed to call Forest Assistants and Grazing Assistants, "Junior Foresters," and Grazing Examiners, Forest Examiners and Deputy Supervisors, "Assistant Foresters". Lumbermen and Scalers will also be "Junior and Senior Aids." Unless well acquainted with the men themselves one would not know from their title what sort of work in the Service they were engaged in. There may be some necessity for doing away with these old familiar and well established titles, but it occurs to me that the matter should certainly be carefully studied from every angle before we give them up and adopt general titles that are in no sense indications of the man's work in the Service.

Wm. C. Barnes.

Branch of Grazing Beats Ponzi in Dividends.

Congress always asks what the returns will be for any increase in our appropriations. As a general thing, the Branch of Grazing can point to concrete results and almost immediate financial returns from moneys which they give us for our work.

On the Wenatchee Forest, recently, the Grazing Examiners of District 6 made a range reconnaissance of a certain sheep allotment including about twenty thousand acres. The result of their study of this range and the forage upon it shows that, with certain changes in the method of handling the sheep while on the range combined with a more thorough utilization of the forage, the range will carry 50 per cent more stock than the Forest Officers handling it have heretofore felt possible. On the basis of such work, the investment of about $300 for the reconnaissance will bring a return in fees, for the first year, of between $600 and $800.

Will C. Barnes.

The Ranger's Joy

Did you ever for a summer try a bachelor's stunt alone,
In a lonely mountain meadow forty miles away from home,
Where mosquitoes wore no muzzles and the flies know how to bite,
And the rattlesnakes were plenty, and the coyotes howled at night?
Did you ever flip your flapjacks in a house so full of smoke,
That your tears dripped in the batter? It is funny, but no joke!
Have you burned your beans and bacon, wished devoutedly for a wife?
If you haven't then you're missing half the joys of ranger life.

Have you tried to catch your horses in the meadow wet with dew,
Where grass grew rank and luscious, that wet your clothing through;
Watched them kick their heels with pleasure, and then start on the run
Across that same wet meadow 'til you wished you had a gun.
Did you finally corral them in a corner of the fence,
Stamping, snorting, wildly eager, looking for another chance,
To dash by, kick their heels up, just as though you were a stranger?
If you haven't then you're missing half the joys of a Forest Ranger.

Have you ridden for an hour along a roaring brook,
Watching trout jump in the sunlight when you didn't have a hook;
When the shadows on the water were alluring as a dream,
Did you swear by all that's holy that as sure as Sunday came
You'd be back there with your fishrod and mix with that little game;
Did you roll out Sunday morning, half awake and half asleep,
To get this little message: "Will you go count Freeman's sheep?"

Have you ridden through the Forest with the shadows at your feet,
While the grouse were drumming 'round you, and you hadn't any meat,
And the quails were thick as spatter, and you couldn't take a shot,
Did the badge on your suspenders help your feelings out a lot?
And at night when you're so tired you can hardly even eat,
Did some tourist "drop in on you", take your only easy seat,
Stick his feet up on your stove hearth, and although he is a stranger,
Tell you calmly as he lolls there, "It's a snap to be a Ranger".

--- Forestry Kaimin.

Housing Shortage in New Zealand.

Apparently the housing shortage is not confined to Washington or any other particular locality. From far away New Zealand comes a report that there is a great scarcity of homes, office accommodations, business structures, warehouses, and schools. There is, moreover, a shortage of all kinds of building material, and large quantities of lumber must be secured from the United States and Canada if the necessary construction is to be carried out. The same report states that the better and more accessible forests of New Zealand have been largely exhausted and that comparatively little timber other than rough construction lumber is available.

Cooperation from Grazing Permittees.

District 6 has taken this season a very effective method to line out grazing permittees along the trail leading toward active cooperation in fire prevention and suppression.

Grazing permits in District 6 for the present season contain a stipulation supplemental to the stock clause on the Grazing Permit Form which removes the indefiniteness of the stock clause and tells the grazing permittee in concise language his exact responsibility and what he is expected to do in case of fire. And in at least one case, on the Wenatchee Forest it has worked. A sheepman placed his entire pack outfit, including stock and packer, on the job of moving camp and carrying supplies into the fire camp. The camp tender of the outfit without awaiting specific instructions from his boss, came to the rescu and provided the necessary transportation. His cooperation was not confined to one trip but to several. He held himself subject to instructions of the men in charge of the fire.

In addition to the special stipulation contained in the permits, Supervisor A. H. Sylvester of the Wenatchee has adopted the somewhat novel scheme of publishing in mimeograph pocket size form a brief and very much to the poin set of instructions to herders, camp tenders and packers of grazing permittees. These instructions are placed in the hands of the employees of permittees. They are written in simple, easily readable and direct form. Each sentence strikes at a point about which we have talked for years. Mr. Sylvester has evidently hit upon the way of getting the things from the "talk stage" into the heads of the permittees and the employees of the permittees. Other supervisors may find the Wenatchee scheme a suggestion worth while.

E. W. Kelley.

A Tip for the Busy Field Man.

Within a few days you will receive Memorandum 326 amending paragraph 4 of the fiscal regulations. The amendment in no way affects the Forest Service. In fact, the only change will be found in line 20 where the amendment substitutes "$200" for"$100".

Forest Products Laboratory Notes.

Dr. Sherrard has just returned from a visit to Dayton, Ohio, where he and Dr. Hawley were investigating the possibilities of alcohol as a motor fuel.

They witnessed while there the trial flight of the monoplane which the Dayton-Wright Company has entered in the Gordon Bennett Cup Race which is soon to take place in France. The fuselage of this plane is like the body of a fish. The wings are of balsa wood and Douglas fir and stick out from the fuselage absolutely without wire bracing. The wheels are disc shape and as soon as the flight is well started, are drawn up and into the space left for them in the sides of the fuselage, so that the outer side of the disc forms part of the slope of the body, and no wheels are visible. This arrangement and the omission of wire bracing greatly reduce the friction. The flight Dr. Sherrard witnessed was at a speed of 180 to 200 miles per hour. The weight of the plane is 1680 pounds and carries only one man. This is the only machine of its kind, and was designed and its making supervised by the man who is to pilot it.

Forest Products Laboratory Notes.

Paul Bunyan, his work "Over There" completed, was in a hurry to get back to the U. S. A. Steamers and airplanes were too slow for Paul, so he embarked in his famous Bark Canoe - the same one he used on the Big Onion the year he drove logs upstream. When he threw the old paddle into high he sure rambled. The sea was covered with dead fish that broke their backs trying to see him coming and going. As he shoved off from France, he sent a wireless to New York, but passed the Statue of Liberty three lengths ahead of the message.

Beg Your Pardon

Some time ago the Laboratory Bulletin commented in lighter vein on the fact that the wood-shop was making a wheelbarrow of bird's-eye maple. Since then the carpenters have had to bear the railery of their friends; and the stern, unsmiling eye of official inquiry has been directed upon them. Lest anyone should charge our capenters with stupid extravagance, we hasten to add that the bird's-eye maple that was used for this humble purpose was taken from a pile of culls which were sapstained and wormeaten beyond redemption, and we can confidently assert that no mandolins are mute, no priceless bedsteads or dressing tables lost to the world because Casey got a new wheelbarrow.

EXCERPTS FROM A FEW OF THE LETTERS RECEIVED BY THE FOREST PRODUCTS LABORATORY SINCE THE DECENNIAL CELEBRATION WHICH WAS HELD JULY 22 & 23, 1920.

Bolling, Arthur Johnson. Editor & Publisher, Lumber World Review, Chicago, Ill.

"The Decennial Celebration at Madison on July 22 and 23 was an event -- to paraphrase Demoyer's statement -- which should be set aside by all of us and 'marked with white stones'".

"I managed to hear nearly everything that was said at the Decennial, but I did not by any manner of means see all that I should have seen, nor meet and shake hands with all the people I should have met, and among other things I failed to see the Forest Products Laboratory as I should see it, and really as I should have seen it years and years ago. ... ...

"I want to suggest now that this be made an annual affair; that we get together once a year in Madison and that we begin right now to arrange for a similar celebration next July."

H. Maxwell, Associate Editor, American Lumberman, Chicago, Ill.

"There was only one voice among all the visitors at the Madison celebration, and that was in praise of the laboratory's splendid work, broad views, fine personnel, and able management of the celebration."

W. A. Gilchrist, Chicago, Ill.

"I cannot tell you how much I appreciate the two days that I spent at Madison. To me it was the most interesting meeting I ever attended, and I think that if this could be made even an annual affair, it would be worthy of consideration."

Wm. B. BAKER, Sec'y. National Council of Furniture Assns., Chicago, Ill.

"Permit me to express to you my very deep appreciation of all the courtesy extended to me while at Madison last week. The feeling of enthusiasm which I carried away with me was equally manifest with all others with whom I came in contact, and I feel that you have established a place for yourself and the laboratory in the minds of everyone which will be of lasting and increasing benefit."

C. W. Hubbard, President, Northwestern Timber Co., Mendota, Ill.

"We brought home with us an entirely different conception of the work of your laboratory, and while we had felt previous to our visit that you were accomplishing a wonderful work, we did not realize the scope of the laboratory until we made this trip."

F. J. Angier, American-Wood-Preservers' Assn., Baltimore, Md.

"I returned to my office this morning, after my very pleasant trip to Madison. I had a most delightful time and a most profitable time, and I wish to thank you and all of my friends in Madison who were so good to me. The Laboratory is certainly to be congratulated on what it has accomplished in the past 10 years, and I am sure that in the next 10 years it will do just as well, and even better. Certainly great problems are to be worked out, and I feel sure that you have an organization fully competent to meet them."

C. S. Brantingham, Pres., Emerson-Brantingham Co., Rockford, Ill.

"I felt that your whole program was excellent and it all seemed to be worked out splendidly. I enjoyed all that I saw of it, and thank you for the courtesies extended to me."

Carl W. Defebaugh, President, American Lumberman, Chicago, Ill.

"Thank you again for your many courtesies to me during my only too short visit to the laboratory last week. I am planning to come up there again, possibly in September, and stay a little while longer."

J. E. Rhodes, Sec'y.-Mgr., Southern Pine Ass'n. New Orleans, La.

"I desire to congratulate you upon the success of the decennial celebration of the Laboratory, and I am sure that all who had the privilege of attendi it, not only greatly enjoyed the occasion, but were impressed with the very gre value of the work which the Laboratory is doing."

R. B. Goodman, Sec'y, Goodman Lumber Co., Marinette, Wis.

"I know of few meetings or conferences that I have attended with so much profit and such a pleasant experience in the good fellowship of the forest fraternity generally."

Washington Notes.

Colonel Greeley returned to Washington on September 4. He says his trip was a dandy and promises to tell the readers of the Bulletin lots of interesting news about Alaska, and the other places he visited. He was particularly impressed with the possibilities for developing Alaska pulp wood chances, and feels that the two Forests there will ultimately play a most important part in supplying our pulp wood needs.

E. E. Carter is back from a trip west, where he took up various matters regarding management work.

District 2 - Rocky Mountain District.

Assistant District Forester Granger has been endeavoring to arrange with the Curtis-Humphrey Airplane people and the Martin-Sweet Motor Co., who also have air planes and make flights, to cooperate with us in detecting and reporting forest fires.

In order to test the ability of the pilots to see smoke in the Rocky Mountains, a flight was made Saturday from Pueblo by the Martin-Sweet people over the Green Horn range. Ranger Clover of the San Isabel N. F. accompanied the pilot, and newspaper reporters were taken along to look after the news and publicity. Ranger Clover and the pilot were very enthusiastic about the trip.

A test fire was set which made only a thin ribbon of smoke, and one which would have been impossible to see with the sky as a back ground, but which they picked up almost as soon as it came up above the tree-tops. The place where the fire was to be set was kept a secret, they had to watch the whole country as they flew out from Pueblo. The ranger reported the fire was very much smaller than an ordinary forest fire is when it is discovered, and he believes that an air pilot could spot even a campt fire which made enough smoke to get above the tree tops.

The Curtis-Humphrey people are to make a test flight from Denver to Estes Park over the Colorado N. F. as soon as a plane becomes available. They had an accident at Estes Park a few days ago and broke up the plane which they had planned to use in this test flight.

Since airplanes are coming into more common use as a means of travel from Denver to points in the western part of the state, it is felt that an efficient cooperative plan can be formed with commercial companies which will be of practical assistance to the Forest Service in detecting fires.

Mr. Leopold, of District 3, has just finished a two weeks' visit to our District. Mr. Leopold is interested in organization problems and especially in the continuation of the study begun by Mr. Morrell a year ago. Most of his time was spent in the field, getting first hand knowledge of our administration and protection systems. The similarity of our methods is perhaps more striking than our differences. Mr. Leopold is an enthusiast with whom it is a real inspiration to come in contact. He has left us with many new ideas, with increased confidence in our future, and with a firm belief in the value of inter-district visits.

Ralph Shaw, Deputy Supervisor in the Durango Forest, has left the Durango Forest to become Deputy Supervisor of the Shoshone Forest. Ralph is going to take his pet mule "Fancy" with him and anybody who has been out with them knows that "Fancy" can locate a trail much better than Ralph, and that is not casting any "asparagus" on Ralph's ability to find trails either.

Since Tommy Thompson has been appointed Assistant District Forester, we can not find him in the office any more; we do not know whether he is too modest to come in here and be congratulated or whether he is hard at work; we rather think it is the work.

Norway pine in Michigan commonly bears seed when growing in the open at from 20 to 25 years of age. Norway pine cones are quite plentiful this year. One tree in the older plantations has been found with several fully developed cones. The tree was planted as a 3-0 seedling in the spring of 1915 and is now about four feet high at nine years of age. This is perhaps the record of the earliest production of seed of Norway pine.

District 3 - Southwestern District.

"Say feller, did you ever have water to haul, and out of what you hauled dabble out a little for the pigs to drink, then dish out a little for the chickens, then a little bucket-ful for the milk-pen calf and allow the wife a little to cook with, then a little more to wash the dishes; then there's the baby's daily, and the rest of the family's Saturday night, and there's the neighbor kids, who, just because it comes out of a canvas sack, guzzle until their little paunches look like kegs, and then occasionally you have to wet your own swallow -- and then after all that, did you ever know the joy of having the water piped from the mountains into your very door yard so all you have to do was to turn a faucet and stand around and twiddle your toes in the mud? Well, them other guys may be feeling mighty proud of them new bath tubs, but after what I've been thru, I'm so goldderned thankful fer just water that I'll gladly substitute a barrel for a tub for awhile. The View Ranger Station pipe line is completed."

Chipman. (Crock)

Go to it Chip, take a bath every hour to make up for lost time.

District 4 - Intermountain District.

Mr. Winkler returned today from a trip over a considerable portion of the Uinta Forest. He reports that range conditions are very much better than normal this season. He also reports having seen several elk of the Mount Nebo herd, which is estimated to now contain about 350. He tells us that heavy rains occurred on the ranges at intervals during the entire month of August.

The following message was received by Ranger Arthur G. Nord:

> "When I was up in the Canyon getting timber I felled one tree that I was unable to get as I found when it fell it lit on a Hornet's nest and there was one in the tree also, so I could not get it but will come prepared to get it and clear up the branches from it when I go for more timber as I want to get some more as soon as I can."

Mr. Mink reports a very successful trip over practically the entire division with Ranger Travis. He was favorably impressed with the condition of the Santa Rosa closed areas. Part of the trip over the division was in company with Mr. Korstian and much to our gratification Mr. Korstian concurs in the idea of making closed areas such as the present ones on the Santa Rosa division, in order to protect the aspen and insure a future forage supply. It was noted that some of the young aspen in the closed area has attained a height of 5 feet. The aspen in the new trail in the head of Cottonwood Creek is becoming a menace to good traveling and has been trimmed out of the trail. The deer are apparently taking advantage of the opportunity for protection within the closed area and visit the salt grounds and often visit the alfalfa fields around the ranches and in some cases have suffered from alfalfa bloat. It is the opinion of the Rangers and the permittees that the deer are increasing and this is attributed to the fact that the deer are getting protection within the closed area.

Verily -

The following is a letter received from the Lemhi:

"On or about August 21 a party of Basques in the employ of Ramon Ytuarte were cutting timber from the public domain on Sheep Creek in T. 11 N., R. 21 E. They allowed their camp fire to escape and a few days later a strong wind caused it to develop into a considerable fire. This office was notified on the evening of August 24 by Forest Clerk Moats of Challis, who also notified Ranger Hammer. The latter went to the scene on the morning of the 25th and after an investigation arrested one of the party and took him to Challis where a complaint was filed before judge Job of the Probate Court. None of the Basques could speak English intelligibly so Hammer could not be sure that he had gone far enough. He telephoned me on the morning of the 26th and I drove to Sheep Creek and assisted him in a further investigation. As near as we could tell the Basques were all guilty so we took three more of them in to Challis. The hearing for all four of them was set for 10 o'clock on the morning of August 28. We were present at the hearing and the employer of the Basques represented them. From his statements it was clear that we had arrested too many of them. Two of them were not present when the fire was started but joined the party later to help put out the fire. Mr. Ytuarte was eloquent in words and gestures, explaining to the Judge how he had warned the men, how careful they had tried to be and how hard they had worked to put out the fire after it got away. Two of the Basques then pleaded guilty and the Judge fined them $15. each. He also gave them a short lecture on fire prevention.

"The willingness of the Basques to plead guilty rather spoiled the detective work we had done. Hammer and I had some exhibits in the way of Basque bread, remains of a dinner in the shape of mutton bones -- all found at the point where the fire originated, -- with which we had visions of constructing an airtight case.

"At any rate I wish to commend Ranger Hammer for taking such aggressive action in this case and making the first case on record for the Lemhi."

District 5 - California District.

Eli Dale - Modoc. Mr. Eli Dale is still holding down the job on the Happy Camp Lookout, which is by the way the only permanently manned Lookout on the Forest. Dale was first engaged as temporary laborer soon after the creation of the Forests. In 1912 when Happy Camp was selected he assumed duty as Lookout. He made good from the first and the Modoc now challenges the world to show a better Lookout man than Eli who has never lost a day from the job. He came near being relieved for two days a couple of years ago as he wished to cast a vote for a former District Ranger who was running for County Sheriff but when the time came Eli could not be induced to turn his station over to another man.

Big and healthy, Eli Dale carries his 65 odd years as though the last 25 of them were missing. Eli with his whole soul in his work is one of the outstanding figures of the Forest Service in the whole of Northern California.

A Story from the Trinity. A District Ranger happened in to a small ranch house. The rancher greated him "I'm glad you came in. There's a tree across the trail just above my house that I've been ridin' around for nigh on two years. When are you boys comin' over to cut it out?" Let him who has no tree across the trail just above his station laugh first. If we substitute "Maintenance crew" for "District Ranger", and "Forest Officer" for "Rancher" in the above, the story will fit many places. Not, however, the above Trinity District Ranger.

Going up! $5.50 for Sugar and $4.25 for Yellow Pine, $2.00 for Douglas Fir and $1.50 for White Fir and Cedar are the minimum prices specified in an advertisement now running for a 150 million foot sale on the Stanislaus. And if, as seems practically certain, the sale is ultimately made, it will be one of the cleanest and most satisfactory consummated in years. There will be no readjustment clause, for the whole amount is to be cut and removed with a three years' period. Total receipts will approximate $525,000.00.

More Goats: Comes now another bleat from the (in)famous Gill goats in Millard Canyon, Angeles. It seems that a short time ago, according to reports, the federal courts gave Allen permission to shoot the goats, which had been butting hikers and rangers off the trails, on sight. Ranger Marx promptly expended $2.00 on ammunition and started training for the fray. But Patrolman McKenzie beat him to it, slaying six of the obliquitous animals with but little delay, And now Marx has submitted a $2.00 item in his expense account. Will he get it? Yes; he will - not!

Suit in the Court of Claims by the Western Timber Treating Company to recover damages from the United States in connection with an old Lodgepole sale on the Lassen has been filed and Mr. Fred K. Dyar of the Department of Justice is now taking depositions. The Company is suing to recover damages on the ground that the timber estimate was too high and that the cut did not hold out. It alleges, apparently, that only a certain class of poles, to be used for power purposes, were merchantable within the meaning of the word at that time, and claims that the sale area did not contain the number (of these special poles) mentioned in the contract.

Hats off to Helms, of New South Wales. Forest Service people have learned the value of big stories as used in publicity work, but we have yet to equal a tale told by A. Helms of the New South Wales Forest Service. An Australian stockman was driving his cattle to their summer range when he reached a swollen stream that he dared not cross. Riding up the stream he found that a great hollow tree had fallen across it. Through this he was able to drive his stock, having first ridden through himself. Counting them as they emerged on the [illegible] side, he found his band 200 short, with none in sight on either bank. Back he rode through the hollow tree and found the lost two hundred up a hollow limb! It is suggested that this is a story without a country and should be adopted by Californians telling Big Tree stories.

Mr. Helms has visited the Eldorado and the Plumes Forests and is now on the Sierra, taking especial note of soil and climatic conditions under which sugar and yellow pine reach their best growth, with plans for future seed collection and plantation under similar donditions in New South Wales. He will spend some time in Oregon and Washington and later in the forests of the southern States. (From the Sierra).

(I'd sure like to know this man. If I could talk to him a while I bet there would never be a shortage of good stories for the Bulletin--Ed.)

"Tired and Weary". A party of deer hunters, led by J. G. Thompson, returned to Chico last night complaining that they had been defrauded out of their vacations by an unruly fire warden who forced them to fight fires in the vicinity of Mill Creek for the past week. The hunters, Henry Willisie of Red Bluff, J. G. Thompson and Charles Coffey of Modesto refused to state just how long they labored, but the blisters on their hands gave testimony to the fact that they saw hard service. Sacramento, Cal. "Bee" of August 19, 1920.

Supervisor Bigelow, who accompanied the Placer County committee on its recent trip of exploration, took advantage of the opportunity thus offered to do some mighty effective educational work which resulted in (among other things) the passage of a resolution urging Congress to make larger appropriations for fire prevention.

Cooperation on the Inyo. About August 1 it became evident that the Lake Mary Road could not be completed as planned, within the allotment set up. Ranger Guy S. Way asked permission to solicit co-operative funds from the business men of Bishop, and was told to "go to it". He succeeded in getting $500.00 deposited with the Owens Valley and First National Banks, to be drawn for expenses of the Road at his O.K. After subscribing these funds, he was told by the people of Bishop to attempt to get something from the ranches, which gave him another "hunch". He then advertised a two days' road building, barbeque picnic for the farmers, particularly the Woodmen of the World, the most of which are farmers. The picnic cost approximately $200.00. There was a splendid attendance, and after carefully comparing the work accomplished with that of day labor, it is estimated that at least $1200 worth of road was built in the two days. Everyone was apparently tired and happy when the fiesta ended. The value to the Forest Service from this picnic was not only in the road built, but the area opened was somewhat widely advertised, and the work of the Forest Service more thoroughly and widely appreciated by the public, through the fact that they visited the area, saw the work that is being done, and were somewhat personally interested.

Recreational Permits on the Eldorado. Mr. L. A. Barrett has just returned from a trip to the Eldorado where he reports the summer home business has increased over 50% this season and unless the Sierra has had a corresponding boom, the Eldorado will soon be in second place. At present every lot along the Lincoln Highway near Phillips is rented and over twenty-five new cabins are in course of construction. More would have been built had lumber been obtainable. While on the Eldorado Mr. Barreett had the pleasure of helping to survey a summer home lot for a woman who had camped on the land every summer for forty years and now wants a permanent cabin.

Dr. Herman von Schrenk, a former Forest Service man in the Office of Products, will address the Engineer's club of San Francisco at luncheon today on the "Proper and Improper Uses of Preserved Timber." Dr. von Schrenk ranks as high in this line of the profession as any man in the country.

Dr. A. Helms of the New South Wales Forest Service has arranged with the Forest Service to collect a small amount of common California coniferous tree seed for his use in New South Wales. Supervisor Bigelow has been asked to secure the seed because Helm believes that conditions on the Tahoe are more similar to those in parts of New South Wales.

Wishing to see what the weasel would do, I picked up the dead dog and, holding it by one hind leg, I hung it over the edge of the hole. After a wait of a few minutes, the weasel came out to the top, smelled of the dog, and taking hold of the head, tried to pull it down the hole. When he could not do that, he tried a grip farther back on the animal which brought him up far enough to see me and he went back underground. This time he came up sooner and tried to get the dog away from me again, staying with the effort longer than he had before. As I remained perfectly quiet, he finally got bold enough to come completely out of the hole, smelled all around the dog to see what was holding it, and finally investigated even going so far as to put his front feet up on my chaps. Evidently, he decided that the animal on the leg of that dog was too big for him to whip, so he finally started away along the hill. The old dogs must have been keeping an eye on the proceedings, for as soon as the weasel started away, one of them took up his trail and overtook him in a little cleared space-- and the fight was on. It was some battle while it lasted and reminded one of a cat fight, but it was of short duration. The dog scored all the points and as soon as he was able to get away, the weasel took out through the weeds and brush and got away.

I know of no law making it a crime to disbelieve this.

-Bennett, Rio Grande. D-2
Bulletin.

"The Forest Fire"

On a river road not far from Portland, a road that wanders invitingly through the ancient trees, the traveler turns one bend to come upon a blackened prospect of charred stumps and stark ruin. A fire thrust through, and leaped the river, and raged away to the crest of that distant ridge not many years ago. The dead firs stand like silver skeletons in the clear distance. And one that is by the roadside bears a forestry service epigram: "This tree will never earn wages."

No, nor give shade, nor add its strength to the sloping watershed, aiding in the retention of soil and moisture. Its course is run, both for pleasure and profit. With such object lessons before them those who enter the Oregon woods should need no warning against the fire hazard. The mute and pitiable evidences of former lack of caution are only too plentiful. It is at this season of year, when for many days the sun makes tinder of the old slashings, the dead undergrowth, that a single spark left unextinguished may rouse to a titanic fury of destruction.

It would not be a pleasant thought to know that one had slain a forest, wholly aside from the economic loss that accompanies such wastage.

- From the Portland Oregonian of 8-12-20

A Bluff that Worked

The story of the wars which were waged between cattle and sheep men in the West in the early days is old, but like many old stories it has a peculiar fascination that keeps it alive. This facination lies perhaps not so much in the deeds of violance which were committed as in the significance of the stories which are told. An echo of these old wars is contained in a letter from a former Service man who was a member of one of the first protective associations organized among the stockmen. One of the most interesting statements made is that the association to which this old timer belonged countenanced "No harm to human beings and was loth to use extreme methods of any kind". But let the old timer tell his story:

"At this particular time The Edwards Brothers were grazing large numbers of sheep in Southern Wyoming, the Colorado line was the dead line. In the past they had run up against the real thing in crossing over to the Colorado cow ranges and were wise, so this year they had sold about 10,000 sheep to a man whose name I do not remember, This man was encouraged by The Edwards Brothers to winter the sheep in the country between the Vermilion and Snake Rivers along the Douglas Draw and on the bad lands to the North of Snake River all of which was in the heart of the cow men's winter range and there was not enough feed for the stock that were already there. It meant starvation to the cattle and ruin to the owners.

It was about December 1 when riders scurried over the country with a message from our then President, to meet on Snake River on a certain evening for important business. When we arrived there with our mess wagon, bed wagon, cook, horse rangler, riders and winter cavy, there were seven other outfits camped on the ground, before morning there were about 300 men in the party. It made quite a cavalcade from there to Green River in Browns Park; the trip was made without any attempt at concealment but everyone was serious. We camped on Green River over night and at daylight the next morning we were mounted and on our way leaving the wagons where they were. It was only a three mile ride to where the owner of the sheep lived. He lived down in the bottom of a draw that was a mile wide and ridges on each side rising about 100 feet above the bottom of the draw. The ridge on the West extended back into a large sage brush flat and just at the break off of the ridge going toward the draw was a sharp rise of about 15 feet. We came across the flat and the president lined us up abreast up and down the ridge just behind the sharp rise out of sight of the ranch buildings. He then called two other fellows and myself and directed us to go down and interview the sheepman. We had instructions not to parley but to give him certain information and request that he immediately remove his sheep to Wyoming and keep them there; if he refused to do so for me to raise my hat and look toward the ridge and if after he had seen the company he still refused, to inform him that I had done the best I could and would not be responsible for the consequences.

We rode down and the sheepman came out, He was a gruff, important acting fellow of the brag order. The two men with me were both even poorer than I at talking so it devolved upon me. I informed the gentleman that we were a committee appointed by the stockmen of Colorado to inform him that they were absolutely dependent on the range for their cattle that he was now grazing his sheep on and they would not tolerate his running them out of business in the country in which they had been running cattle for many years; that he was requested to remove the sheep to Wyoming at once and keep them there. He said, "Gentlemen you go back to your cow men and tell them I said they might go straight to hell, I am going to run my sheep where I damn please." After asking him if that was his final answer, and his saying yes, he started to go in the house. I raised my hat and asked him to waite a minute, as he turned, I looked to the West and he did, the sight which met our eyes, I shall never forget.

The sun was just up nicely in our backs and there was about 2 inches of snow on the ground. We saw nearly three hundred men lined up abreast on the crest of the ridge, all motionless except for the horses throwing their heads at intervals as though they were anxious to charge; each man had a rifle out and resting across the pommel of his saddle. They were about 3 feet apart and made a long and stirring looking picture.

After about a minute of looking, the sheepman said "Who are they?" I said "they are the cowmen that I mentioned to you." He looked pale and trembly, but finally asked how long a time he could have to get out. I told him to start in 24 hours and have every sheep out inside of three days and not to return unless he was ready to accept different treatment than he had received this time. He said I need not worry. We returned to camp and stayed where we were until reports of riders sent out showed that all sheep had crossed the line, then we returned to our various ranges and he did not cross the dead line again as long as I was in the country."

The "bluff" worked that time. Later, however, the sheepmen began to fight back and a long casualty list on both sides attested the bitterness of the "wars"

No Shortage of Pipe Wood

A large concern of smoking pipe manufacturers have had a representative in California during the past summer looking into the available supply of woods suitable for pipe making. Those woods in which particular interest was displayed were chapparal, manzanita, mountain mahogany, and mesquite.

Apparently the manufacturers of pipes in this country are still interested in the use of domestic woods although ample supplies of French Brier are now available. Apparently the questions to be settled are the relative values of domestic woods as compared with the French Brier and the cost of these woods as against that of the imported products.

The use of the body wood only of mountain mahogany has been heretofore considered but the wood was deserted because of the lack of figure. Apparently the roots of the plant have an excellent figure, and there is a possibility that they may even be suitable for pipe making.

District 7 reports a sale of mountain laurel roots for pipe making on the Nantahala, but indications here are that the laurel root probably cannot successfully compete with French Brier.

The Paper Industry in Sweden

According to the latest available statistics there are in all 26 paper mills in Finland, with 71 paper-making machines, and 7 cardboard mills with 12 machines. The water power utilized for working these mills is 73,390 horsepower, and steam 13,820 horsepower. The number of hands employed exclusively at the paper mills is 6,096, and the yearly output is 230,000 tons. The capital involved is 261,998,000 Finnish marks.

There are also 18 sulphite mills producing annually 190,200 tons with a capital involved of 194,244,000 marks, and 6 sulphite mills, producing 66,000 tons with a capital of 104,000,000 marks. The sawmills number 375, employing 14,111 hands with an annual production in value of 98,962,900 marks.

This Must Be Some Exhibit

The following letter regarding the D-5 exhibit at the California State Fair has been received at Washington:

Sacramento, Cal.

September 6, 1920.

Mr. Herbert E. Smith,
U. S. Forest Service,
Washington, D. C.

Dear Sir:

The exhibit of the U. S. Forest Service which includes a practical demonstration of the radio service and airplane forest fire patrol service is one of the most unique and interesting of the 1920 State Fair, and I assure you there are some interesting exhibits this year.

We want to compliment both you and the department you represent and the young men in charge for the masterly way in which this exhibit has been assembled and installed, and the courteous manner in which they explain to interested throngs the details of its operation and the value of the service rendered.

Our people seem to get a better realization of their own civic duty in helping to prevent forest fires through just such demonstrations as these, which make a lasting impression.

We trust that the department will again make an exhibit next year for the reason that it is of such great value to the State, nation and the people.

Again congratulating you on the effectiveness of the exhibit and thanking you for the pleasure it has been to us and our hundreds of thousands of visitors, I am

Very truly yours,

STATE AGRICULTURAL SOCIETY

By Geo. C. Roeding,
President.

(Congratulations D-5- This is the kind of thing that brings home the bacon. Ed.)

Study Courses Worth While

From the ranger's view point the study course offered by District 2 is of great value, providing the ranger starts the work with the right objective. If he takes the course with the idea that he has to make a showing of some kind, it won't amount to very much; but if he goes after it with the idea of increasing his worth to the Government and improving his own mind, then he is getting somewhere. I took the Forestry course last winter because I had to in order to handle my timber sales with any intelligence and I believe most new men are in the same fix. The ten lessons which I took have enabled me to answer many questions which would otherwise have been embarrassing, and have helped me in the administration of sales.

The lessons are sent out at a time when the average ranger does not have much to do and, therefore, do not encroach on his other work. In the Forestry course no confusing questions were used.

The only fault I can find with the work is the lack of field work, which is essential in a study of this kind. If a class of men could get together in the field under a good instructor the results would be greatly increased. Personally I would be willing to pay my own expenses for this end of the work.

Considering the need of this kind of instruction and our inability to get it from any other source, it would be a mistake to discontinue the courses.

- J. L. Nelson (Rio Grande)

The Glacier Highway of the Tongass

Work is now under way on a road project in the Tongass National Forest which some day will be one of the show places of all Alaska. This road is known as the Glacier Highway, and when completed will be some 60 miles in length and will extend from Juneau along the east side of Lynn Canal to Berner's Bay. The Highway will not only open up a region possessed of most unusual scenic beauty, but will make accessible agricultural products that are now being grown in the Eagle River region, and will bring settlers to potential farm lands in that region.

From Juneau the highway runs north along Gastineau Channel, past extensive sea meadows, with a good branch road to the wonderful Mendenhall Glacier (some 11 miles from Juneau), to Auk Lake and Auk Inlet. Construction work on the latter section is now being carried on by the Forest Service and the Bureau of Public Roads. The Alaska Road Commission and the Territorial Board of Road Commissioners are also cooperating.

Although only some fifteen miles of the proposed sixty of the Highway have been constructed, it is already considered by Juneau people as a distinct scenic asset. In the first thirty miles, to Eagle River, wonderful views at different angles are obtained of Lemon, Mendenhall, Herbert and Eagle Glaciers, while the vistas of Auk Lake and Inlet are most unusual. The completed Highway will afford alternate views of magnificent glaciers, forest covered mountains, ice-capped peaks, inlets and bays. In the Berner's Bay region are glaciers of wonderful extent and interest.

When this Highway is completed it is not too much to expect that tourists will leave the steamers at Juneau and motor the sixty miles to Berner's Bay where they will await the steamer, in a comfortable, modern tourist hotel. There will undoubtedly be chalets at the principal glaciers where tourists may spend a few days exploring these ice-fields under the protection of experienced guides.

Lightening the Load by Cooperation

It is my opinion that forest work is a failure without cooperation. To get cooperation we must, as forest officers, get the idea out of our heads that we are carrying a big secret under our "John B's", and get down on the level with our permitees and National Forest users as a whole, impressing on their minds that we consider them free, honorable American citizens and taxpayers who make possible the positions we now hold.

An American citizen placed on his honor is less apt to cause a trespass suit than one who knows that he is held in distrust by the forest officers with whom he deals. This makes it necessary for cooperation to be applied through the various branches of the service, else forest administration will not bear inspection by the National Forest users.

It is necessary for a new ranger's work to be outlined by a supervisor at the beginning of the season and not at its close if said ranger's work is to be satisfactory. One day of the supervisor's time at the beginning of the field season can often save the expending of several days of his time and that of the ranger gathering data for a trespass suit which necessitates, also, several days time of the men in the district office. This is largely due to the misunderstanding between the ranger and his permitees which in turn is due very often to a misunderstanding between the ranger and his supervisor.

I believe that the enemies of the Forest Service are now very few, especially in the Western states, and that our users are out to help the cause of the National Forests along toward success. Why then should we expect the users to abuse their privilege on the forests? For example after a permittee has paid his grazing fee on a number of stock why should we think him guilty of willfully leaving his alloted range? I for one do not believe such is generally the case, more often said trespass is due to the poor help which said permitee is forced to hire or the fact that he received little or no cooperation from the ranger at the time of entering the forests.

I hope that we as forest officers will extend enough cooperation and plain explanations both to our fellow officers and National Forest users to make it unnecessary to carry a wrecking bar and often use it to obtain the necessary information.

- W. C. Clemmons, Holy Cross.

Washington Notes

With the advent of cool weather various members of the Washington Office who have been vacationing in the field are beginning to drift back home. Raphael Zon and Andy Frothingham are among the latest arrivals. They went South ostensibly to make growth studies, but their main topic of conversation seems to be the long hikes which they were forced to take in an attempt to follow various Supervisors and Rangers of District 7. Just how much growth studying they did remains to be seen.

E. R. Hodson who has been in Virginia, Maryland, and Pennsylvania studying the effect of the method of utilizing blight infected chestnut upon the succeeding crop has also returned. He reports the blight is making steady progress in the Virginia Forests and says that it is only a matter of time before chestnut will be wiped out there. Upon his return to Washington Mr. Hodson was informed that he had passed the examination permitting him to practice law in the District of Columbia.

Forest Products Laboratory Notes

The Inspired Reporter:- When J. D. McLean our teredo expert was in Sheridan, Who., he was interviewed by a young woman who was a reporter for the local newspaper. As a result of this interview a very sprightly account of the Forest Products Laboratory appeared in The Sheridan Post. It went in part as follows:

"Research Work of the Tree Doctors

"J. D. McLean of Madison, Wis., is a visitor in Sheridan this week. He is a representative of the Forest Products Laboratory and his visit here is for the purpose of cooperating with the local forest officials in the work of preserving the forest reserves of western states

"At the laboratory in Madison experiments are made and chemicals produced, which, when applied, lengthen the lives of entire forests....... The Forest Products Laboratory sends representatives from coast to coast, and especial attention is given to the forests of the western states. These representatives are doing a great deal of research work and upon finding adverse conditions in the growth of trees, an examination is conducted, as a result of which experienced and brilliant chemists undertake to discover means of eradicating these conditions.

What you can buy with one dollar

100 lbs. of coal
a set of buttons for a suit of clothes
2 board feet of quartered oak
2 lbs. of cookies
three visits to the Orpheum
7 good cigars
a hearty meal at a cafeteria
5 of Morgan's malted milk chocolates
one-third of a classy necktie
a membership in the Forest Products Club.

Join today!

A Valuable Wolf.

There is one lone wolf on the Harney Forest that has been causing the stockmen a great deal of annoyance for the past several years. Since the first of last October, a record has been kept on the cattle killed by this animal and during nine month's period (October 1919 to July 1920) a total of 66 head were reported. The stockmen feel certain that there have been several killings that have not been discovered, and therefore place the estimate at 75. Most of these have been yearlings and a few two year olds. Their value would average $40 or a total of $3000. This is the fourth year that this wolf has been working in the same locality and although previous to last October no record has been kept of the loss, it has been practically as heavy, which means that this one wolf has destroyed more than $10,000 worth of cattle in one locality. Mr. H. L. Williams, of the Biological Survey, has been assigned here with instructions to stay until the wolf is caught, and although he has now been trailing him for about three months, Williams states that he is not yet discouraged.

- Conner, Harney.

District 2 - Rocky Mountain District

For a number of years it has been the custom of the Nebraska National Forest to hold a Community Picnic at the Bessey Nursery on Labor Day. Because Labor Day this year came while the State Fair was in progress, the annual picnic was held on September 1, and in order to make the occasion one of more than just local interest the Loup Valley Farm Bureau was invited to combine its annual fall picnic with the Forest Service.

The day was ideal. Early in the morning a steady stream of cars and visitors began to arrive and continued to come until one of the largest crowds ever attending the picnic had assembled on the grounds. People from all over the State were present and the total number was around one thousand.

An informal program was arranged after everyone had enjoyed an old fashioned picnic dinner in which all kinds of good things to eat were in evidence. District Forester Peck gave a short talk in which he brought out the contrast in the appearance of the hills adjoining the nursery grounds now covered thickly with growing pine trees with the grass covered condition as they existed seventeen years ago, when he first visited the Nursery at the time the work was just starting. Forest Inspector C. G. Smith of the Washington office was also present.

After the speaking the balance of the day was taken up by a ball game and an exhibition of riding wild horses. Many people visited the Nursery for the first time at the picnic and much favorable comment was expressed by various ones and the local press as to the progress which is being made in artificial afforestation of the sandhills.

- Nebraska Forest.

The Colorado & Southern Railroad recently announced an increase in the price of No. 3, standard gauge 6" x 8" x 8' pine ties from 80¢ to 96¢ each. Seconds and usable rejects will be accepted at 64¢ each. No. 3 narrow gauge ties were increased from 65¢ to 72¢. Seconds and usable rejects will be accepted at 48¢. In sales on the Pike and Leadville Forests, tie inspections have averaged 60% firsts, and 40% seconds.

The D. & R. G. Railroad announced the following prices effective June 1: Douglas fir, grade 4, heat, $1.25; grade 3, over 25% sap, $1.07; Usable rejects are accepted at 75¢. Yellow pine, sawn or hewn, grade 4, heart ties are quoted at 92¢; ties of the same grade containing 25% to 50% sap, 80¢. Class 3 ties, over 50% sap are listed at 65¢.

In some places, the D. & R. G. has been accepting lodgepole narrow gauge ties at the same price as yellow pine sap. In a recent inspection on the Cochetopa, lodgepole ties were accepted as yellow pine heart where they had less than 25% sap wood.

District 4 - Intermountain District

Interesting Changes Noted When Remeasuring Plot:- A sample plot in yellow pine established 11 years ago by Mr. Hodson on the Salmon Forest was recently examined again by Mr. Baker. This plot was cut over just before the trees were measured and now the trees have been remeasured. The large trees show a considerable growth and old nails which were driven into the trees tomark the point at which the diameter was measured have disappeared into the bark in many cases. The most striking thing was the fact that when Mr. Hodson measured the trees there were only 162 on the four-acre plot, which were smaller than 4-1/2" in diameter and over 4-1/2' tall, while at the present time there are 1,340 trees of this size showing a remarkable increase in the number of small trees following cutting.

A Worthy Plan

A plan whereby each District Ranger addresses a letter to the Secretary of each Stock Association at periods of five to ten days just prior to shipping, telling of the condition of the stock, how the range is holding out, whether the beef will shrink if held longer, etc., has been tried out in several instances and proved very helpful to the stockmen. This information was so well received that it is believed that we should make it a regular procedure. The report should be short and contain the information any man wants just prior to shipping his beef. Let's hear from the Rangers if any one does not think it good business. Otherwise, try it.

Lambs Weighing More Than Average

Ranger Huffman reports lambs from the Stanley Basin range weighing much over average. In weighing up lambs to gather data on shrinkage between the summer range and Ketchum, the shipping point, it was found that the 100 lb. scales heretofore used with little trouble were not big enough this season to weigh anything but the smaller lambs.

Among the many notable features of the Nevada is a "Lost Mine". The story of this mine varies in particulars with each telling, but all seem to agree that a rich body of silver ore was discovered by the Spaniards and that a large quantity of "high grade" was taken out on pack horses at some time before the settlement of this section of the country. This "Lost Mine" is said to lie upon the slopes of Mt. Moraja. One of the first parties to search for this treasure was guided by Indians who treacherously attacked the prospectors shortly before the mountain was reached. One white man was killed and the grave may be seen about two miles north of Mt. Moraja in a canyon now called "Dead Man".

On July 14 Ranger Quate came upon two men from Los Angeles and a local guide who were searching for this mysterious ore deposit. They had received a map and detailed information as to the location of the mine from an old prospector, now living in California, who had prospected on Mt. Moraja in 1870. It developed later that the directions of this old prospector took them directly to a small silver ore body upon which considerable unprofitable work had been done some forty-odd years ago. Two disappointed fortune seekers have retraced a fruitless journey of more than a thousand miles but undoubtedly the story of the "Lost Mine" will continue to live and grow.

- Nevada Nugget.

(This is a nice little story all right, but probably every Forest in the West has got a "lost mine" of some sort; usually it's a gold mine that runs $20,000 or so to the ton. Mines like this make nice things to talk about but that's about all they're good for. I know, Buddy, because I've looked for 'em. Ed.)

Increased Interest in Bear Valley Colony

The Colonization work in the Payette Forest is developing results beyond our fondest expectations. A letter just received from Emmett contains the announcement that four additional settlers have located in Bear Valley recently. The entire group of settlers in the Valley are reported to be cutting and stacking hay getting ready for the winter. Most of the settlers have small gardens in which are grown such vegetables as the frost does not kill. Having finally satisfied themselves of the agricultural character of the land, they have abandoned all pretense of placer location and will hereafter devote their energies to straight farming. The fact that this area has been classified as non-agricultural and therefore is not open to entry does not seem to have discouraged any of the potential agriculturists and due to the long delays and other circumstances, such as the interference of fire protective plans, it has thus far proved impossible to convince any of the volunteer land classifiers that the Secretary's judgment regarding agricultural values is superior to their own.

The Chief personnel Officer of the Department in many cases is requesting that we furnish him with the correct date of birth of District 4's personnel. Recently eight personal record sheets were returned with the request that we state which of two dates mentioned was the correct date of birth. In two cases there was a variance of 10 years in the dates given. It would seem that there ought to be no difficulty when the oath and personal statement sheet is submitted to indicate the correct date of birth and in subsequent appointments to use this same date.

District 5 - California District.

"B. C. Goldsmith spent several days on the forest territory near Rainbow last week running lines for the Forest Service. One day he had an unexpected visitor in the person of a big black bear. Mr. Bear seemed to be very much interested in Mr. Goldsmith's work and proceeded to follow up the line and perhaps have a personal interview with the local surveyor, if Mr. Forest Man would have waited long enough to accommodate bruin; but instead he started a new line right over the hill at right angles. Perhaps this latter line was to have been run alright, but we are of the opinion that Mr. Goldsmith ran along this line far ahead of schedule.

Mr. Goldsmith had no gun and perhaps it was just as well, as it was only last week that two colored gentlemen of McCloud were taken before the judge for killing two bear and they tried to convince the judge that they killed the bruin in self defense, but the judge could not see it that way. If Mr. Goldsmith had killed the intruder in self defense he might also have had a time convincing the judge and it would have been hard luck to donate in such a case. Goldsmith believes in the old saying, "The man who fights and runs away will live to fight another day. - but he ran away before fighting."

A Mighty Good Practice.

Supervisor Maule follows the practice of sending his live stock journals, after he has finished reading them, to stockmen's camps, and this action is greatly appreciated by the stockmen. It is suggested to Supervisors that not only livestock journals but other trade papers such as the "American Lumberman" might well be sent those interested. Particularly the Rangers should not be overlooked if any of them should desire to see any of these trade journals. (PGR)

Housekeeping in the Sierras.

Resort Keepers throughout the Sierras report a great increase this year in the demand for housekeeping tent and cottage accommodations, and many resort keepers plan to increase these accommodations materially next season. Due to labor conditions resort keepers say the rental of housekeeping accommodations is more remunerative to them, and less expensive to the public than regular hotel accommodations.

Trinity Game Notes.

On August 19th, Charles Hanes of Weaverville was arrested for having killed a doe. He was taken before Justice Barber and fined $50.00. Arrest was made by G. O. Laws and C.O.Fisher. This is the same man who killed a bear a short time ago, claiming self defense and he was released without paying a fine.

Dr. George W. Dickens of Pickets, Contra Costa County, was arrested on August 24th near Ruth, Trinity County, by Assistant District Ranger J. N. McKnight for killing grouse out of season. He was taken before Justice Russell of Ruth, where he plead guilty and was fined $25.00. He made the statement that he knew he was doing wrong but having never killed a grouse before, he couldn't resist the temptation.

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

September 20, 1920.

A New Plan for Study Courses

Much has been said for and against ranger study courses. Various methods have been tried out by the Districts with varying results. It is generally agreed that there is a need for something of the sort, but there is considerable difference of opinion about the best methods to be employed. The following extracts from a letter from Mr. Pooler tell how District 3 proposes to handle the matter:

> "Heretofore all of the courses of instruction offered in other Districts have depended upon what in brief amounts to the correspondence school method. The central idea of the plan we are working upon for D-3 does not depend on the correspondence school method, but rather on personal instruction. In order to carry out our course, we plan to start with the technical men and other specialists, freshen them up on their technical forestry and other subjects to be covered, use them as a means fro making instructors out of as many other staff and District office men as possible, and then rely upon field trips and ranger meetings as the means of extending instruction to the entire field. Obviously, this will preclude the possibility of a synchronous schedule of courses throughout the District, but we believe that in the end its advantages will outweigh the difficulties.
>
> "We expect to be able to bring into our program the stimulating influence of examination. This may be only in the form of verbal quizzes while on Forests but in the course of time may take the form of written examinations. We are working in new ground and perforce must feel our way along and evolve some of the details of the plan as our work progresses - this matter of examinations is one of those details.
>
> "Our system will, of course, have to start from the top down and for the present winter we are accordingly planning a night school in technical forestry for the entire District Office; the technical men in the office to act as instructors and divide the work among themselves. The next step will be for District officers to extend instruction to the staff men and as soon as this is started, the field courses can begin.
>
> "We realize that some one man in the District Office will have to supply the motive power for keeping such a system in motion. The individual to be charged with this responsibility has not yet been selected but this will not prevent the first step, namely, the District Office night school this winter. With a favorable outcome of our 1922 allotment estimates we believe that a man can be provided to spend his winters on this work. The system involves no financial liabilities except the time of one man during the winter season and possibly a slight additional expense in connection with ranger meetings and Supervisors' meetings which are to be made the occasion for summing up and evening off the work done in the course of regular field trips by instructors.
>
> "Our propoposed reliance on personal instruction will not, of course, preclude the judicious use of circularized material such as the "Research Remarks" of D-4, which are very excellently gotten up and which we have much admired. However, we are deliberately laying the emphasis on the personal contact feature of our plan because we consider this feature essential to the full success of any plan through inspiring in a larger proportion of the District personnel a desire to acquire more specific knowledge of various lines of our Forest work."

He Didn't Know When He Was Beaten

A report from Inspector Kelley related that Supervisor Macduff in the face of what would ordinarily be considered as insurmountable Government red tape had succeeded in getting some needed road logs published promptly. This sounded so much like a return to the days of Aladdin's lamp that we wanted to know more. We didn't doubt Mr. Kelley's veracity, but we wanted to be shown so Mr. Macduff was asked what about it. In the following letter he reveals the secret.

> "Publication in local newspapers of "The McKenzie and Williamette Road Logs", (Compiled for the Cascade Recreational Folder), received considerable favorable comment, particularly from residents and business people in and near the Cascade National Forest on those roads; and as a result both Ranger Jones and Deputy Supervisor Taylor suggested to me that we have them mimeographed for distribution.
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> "On inquiry I learned that the recreation folders in which the logs were included could not be expected from the Public Printer until this fall. It then occurred to me that by using the road logs as an advertising medium for the business people along the roads I might be able to secure sufficient funds to pay for printing. The various business people along these roads were invited to contribute towards the printing bill whatever amount they felt disposed to give if they considered it a worthwhile advertising investment. A total of $225 was pledged, 3000 copies of the logs were printed at a cost of $186.50. Two subscribers failed to pay and one subscription was reduced so that the total amount paid in was $186.50.
>
> "Mr. R. A. Babb of Eugene consented to act as treasurer, receiving subscription payments and paying printing bill.
>
> "Practically all the fire material was cribbed from the material furnished by the District Office. Engraving showing location of these roads with respect to Eugene was loaned by the Eugene Chamber of Commerce.
>
> N. F. MACDUFF.

Last Minute News of the Fire Season

While the ten-day fire reports for the period ending September 20 have not all been received as we go to press, the FF expenditure to that date was very close to $600,000. The season is practically ended in all districts except District 5, and no further large expenditures are looked for. The fall fire season in District 7 will open up about October 15.

The Fire Record in District 1

The following statistics show how District 1 handled the fire situation this summer:

Total number of fires up to August 30, 1600.
Total area burned, approximately 75,000 acres.
Causes of fires -

Lightning,	80.24 per cent
Campers,	7.8 " "
Railways,	3.7 " "
Brush burning,	2.3 " "
Unknown,	2.7 " "
Incendiary,	1.2 " "
Lumbering,	1.0 " "
Miscellaneous,	.9 " "

The proportion of fires of different size is as follows:

Class A	56 per cent
Class B	34 " "
Class C	10 " "

The most striking characteristic of the fire season was the prevalence of lightning storms with little or no rain, many of which started from 10 to 50 fires over a few square miles of the higher mountain regions. This imposed a very severe strain upon the patrol organization, and in the main the situation was splendidly met. The vast majority of these lightning fires were caught and put out before they reached serious dimensions.

The Lolo National Forest had a total of 193 fires. Only 7 of these reached the Class C size, and not one of them reached an area of 100 acres. Similarly good records were made by the Bitterroot and Clearwater Forests.

One of the most gratifying features of the season was the small number and small proportion of man-caused fires. By and large we have probably had the best cooperation from lumber companies, campers, settlers, and the general public in this District that we have ever had; and it is evident that the people of this section are becoming more and more aroused to the forest fire danger and the need for caution.

Figures for other districts will be printed as they are received.

Wood Preservation Statistics

The work of compiling the report on the Consumption of Preservatives and amount of Material Treated in 1919 was completed by Research in July. These statistics show increases over the 1918 figures in not only the quantity of preservatives used but also in the amount of material treated. In 1919 there were 65,556,247 gallons of creosote, 2,412,592 gallons of paving oil, and 102,011 gallons of miscellaneous preservatives used. In addition, 43,483,124 pounds of zinc chloride, the largest quantity of this preservative ever reported by the industry, were consumed. Included in the 65,556,247 gallons of creosote mentioned above, are 6,493,974 gallons of imported oil. The importation of foreign oil increased in 1919 over the quantity reported in 1918 by 4,328,238 gallons. Prior to 1917 the treating plants of this country depended upon foreign manufacturers for approximately 50 per cent of their creosote consumption. Most of this oil came from Germany and England. During the war, however, these supplies were cut off and the plants looked to domestic producers for their supply. Of the imported oil used in 1919 there were 5,587,568 gallons imported from England and 906,406 gallons from Canada.

The material treated consisted of crossties, piling, poles, wood blocks, cross-arms, construction timbers, and miscellaneous material such as tie plugs, railroad crossing plank, shingles, mine timbers, pole steps, pipe staves, anchor slugs, etc. The total amount of wood subjected to preservative treatment by the 108 plants that were active during 1919 was 139,878,584 cubic feet, or 17,265,694 cubic feet more than was treated by the 107 plants that reported the year before.

The wood-preserving industry in the United States has been built up largely on railroad timbers. In view of this fact, crossties have always constituted the bulk of the material treated, and in 1919 constituted more than 80 per cent of the total of 139,878,584 cubic feet reported.

During 1919 three new plants started operation. One of these was the plant of the General Wood Preserving Company, Inc., at Bay Point, Calif. Another was the Hattiesburg Creosoting Company's plant, Hattiesburg, Miss., and the third that of the Shreveport Creosoting Company at De Ridder, La. The last named plant is one of the fifteen plants owned and operated by the American Creosoting Company, Louisville, Ky., the Vice-President of which is Mr. Carl G. Crawford, a former member of the Forest Service.

Forest Service Women Face Danger Calmly

Alaska is still the land of thrills, and the Tongass is doing its bit. The day after Clerk Molineaux's escape from drowning at Loring, what might have been a tragedy occurred near Metakatla, on Annette Island, south of Ketchikan. The "Vamoose," the Land Classification boat, went to Metlakatla on August 16, carrying Wellman Holbrook and Adam Wright, to examine a homestead near Metlakatla. It also had on board eight Forest Service women who were going to pick berries on an island near Metlakatla. When ready to return to Ketchikan the "Vamoose" picked up the women and when about a mile from shore the engine backfired and set fire to the gasoline. The situation was extremely serious, but owing to the coolness and presence of mind of all on board the gas and oil feeds were at once cut off, the pyrenes got into play, distress signals sent to the cannery at Metlakatla, the boat lowered and a load of women rowed ashore by Mrs. Blodgett (wife of Engineer Lyle Blodgett).

Cooperation

We have been talking cooperation until one may think we have gone cooperation crazy.

When we want to build a trail, we ask for financial cooperation. We hire a lookout man or patrolman and then ask the Forest residents to help pay their salaries. This may be all very well and in some cases, it may be good business. I believe, as a rule, we look at cooperation from the wrong viewpoint. We should not ask the Water Companies or Counties to help us. This gives the wrong impression. For instance, we will say that a certain water company gets its water from a watershed within a National Forest. The Forest Service is protecting this watershed, but, the Company charges the valley residents for the use of the water, and by doing so, they have a commercial proposition from which they derive a profit. The Forest Service is protecting this Company's business, or, in other words, we are helping the Company to make a success of their enterprise, so why not put it up to them in a different light. Don't ask them to help us, but point out to them that we are trying to protect their interests and will continue to do so, but in return, feel that they should bear at least a portion of the expense. We are helping them and they are the ones reaping the profits, so why not expect them to pay for the protection.

In the same way, a Company might start a hardware store from which they expect to make a living. Would it be reasonable for the Government to pay the salaries of all the clerks needed to run the business. Certainly not. Then why should we feel backward in asking a similar business organization to pay a portion of their running expenses. They should appreciate any free assistance the Government might offer.

You may say that the protection of a watershed is different, that the public is deriving the benefit. Maybe they are, but they are also paying some water Company or City for the water they use before they can raise crops from which the country as a whole derives the benefit.

The public pays for the crops, why should they also pay all expenses incident to raising and harvesting them? I firmly believe requests for cooperation should be confined to those directly benefited.

S. A. Boulden in Cleveland Bulletin.

Rough Stuff in Wyoming

After long and careful consideration, and much discussion with interested users, a decision to consolidate the Bridger and Wyoming Forests in District 4 was reached a few months ago. Under the old order the headquarters of the Wyoming was located at Afton, a little town in Star Valley, Wyoming, 52 miles from the railroad at Montpelier, Idaho, and the Bridger headquarters was at Pinedale, some 120 miles from the railroad at Kemmerer. Under the consolidation it was decided to locate the new headquarters for the enlarged unit at Kemmerer and Supervisor Chas. A. Beam was duly instructed to close the Afton and Pinedale offices and move to the new headquarters town.

And then the fun began! Witness Supervisor Beam's story of what happened, as contained in a letter to the District Forester under date of August 28.

> "In compliance with your instructions to move the Pinedale and Afton Supervisor's offices to Kemmerer, I proceeded to Pinedale on August 17 for the purpose of removing that office to Kemmerer before bringing in the Afton office. I arrived in Pinedale at about 6 P.M., on the 17th, and after having supper went to the Supervisor's office, where I was waited upon by a committee of Pinedale and Upper Green River Valley residents, consisting of L. H. Hennick, W. J. Shanley, E. S. Plank, and F. C. Marshall; Mr. Shanley, acting as spokesman for the delegation, who specifically forbid me removing any part of that office to Kemmerer. He and MR. Hennick were very loud in their accusations against both yourself and me, stating that every agreement made by yourself to them had been broken. They accused us of "putting one over on them", in that they were not given a chance to present their protest at the meeting held in Kemmerer on July 27, or thereafter.
>
> "After they had talked for a considerable length of time in this manner, I informed them that my instructions were to move the office, and that I had come there for that purpose and expected to do so unless otherwise directed by your office. They requested that I telephone you the following morning apprising you of their protest to moving the office, and asked me to defer further action until the matter could be given further consideration by all persons concerned. I informed them that final action had been taken in the matter, and that in my judgment no good would result from such a conversation, but in order to satisfy them I consented to do so, which I did the following day. They, however, demanded that I do absolutely nothing toward moving the office until a mass meeting of Upper Green River Valley people could be held, which was called for the following day. I agreed to meet with the people the following day, and therefore, deferred any packing of equipment until they had had time to hold the meeting. I have been informed that a great majority of the Bridger users were communicated with over the telephone by this committee, and requested to be present at the meeting the following morning. However, the only additional person to the committee of the previous meeting was Mr. P. W. Jenkins of Cora, Wyoming, who was very loud in his accusations against you, stating that in a personal conversation with you at the close of the banquet on July 27, you informed him personally that the consolidation would have absolutely nothing to do with the removal of the Supervisor's office from Pinedale. He also made several other statements which I personally know to be absolutely incorrect. At the close of this conversation Mr. Shanley advised that if I attempted to remove the office from Pinedale I would meet with every opposition that the people of Upper Green River Valley were capable of conceiving. Using his own words, he stated: 'We will deal you all the hell possible for a community of people to deal a man.'
>
> "I, therefore, quietly advised them that I would proceed with the removal of the office regardless of their protest, whereupon I telephoned to Mr. Blackman of Daniel, who is conducting a freighting business from railroad points to the Upper Green River Valley by auto truck, and he gladly consented to move the office for me as soon as it was packed and ready to load. Therefore, Mr. McKee, Miss Bayer and myself proceeded to pack and arrange the office for shipment, expecting Mr. Blackman to come the following day to load the equipment and haul it to Kemmerer. About 5 o'clock that afternoon a Mr. Hagenstein, Cashier of the State Bank of Pinedale, called at the office and informed me that Mr. Blackman had telephoned him requesting that he advise me that he had changed his mind relative to hauling the freight, and that I would necessarily have to secure some one else to do the work. The following day I made a trip to Daniel, whereupon I secured the promise of freight truck services from a Mr. Bert Atwood, who is a contractor and builder in that part of the country, and who is at present ....

constructing a large school house at Daniel. He is employing the services of two large trucks, and he promised to send these trucks to Pinedale for the load the following day. I, therefore, waited the arrival of these trucks but they also failed to put in an appearance. While I have no definite information in this case, I feel sure that pressure was brought to bear upon Mr. Atwood which caused him to change his mind in the matter. While at Daniel on this occasion I met Mr. Blackman and had a personal conversation with him relative to the hauling of this freight, whereupon he advised me that within 10 minutes after contracting with me over the telephone to haul the freight, he was called by some unknown person from Pinedale and advised that if he showed up in Pinedale with his truck for the purpose of hauling that office equipment his truck would be immediately destroyed and he would be fortunate if he escaped with his life. This, of course, was the cause of his change of heart. Finding there was no hopes of securing freighting services in that vicinity I proceeded to Big Piney, at which place I was successful in securing the services of a large auto truck owned and operated by the Frank Burney Mercantile Co. of that place. This truck, however, was at that time on the road to Rock Springs for a load of freight for the Company, which naturally necessitated our waiting until its return; whereupon it was immediately dispatched to Pinedale and the equipment loaded. The load left Pinedale at about 8 P. M. Sunday August 22 for Big Piney, expecting to come on to Kemmerer the following morning.

"Unfortunately, however, the truck became stalled in an alkali soap-hole from which it was not removed until the following day. They had not gone more than three or four miles after getting free from the mud hole, when the rear axle of the truck broke, which necessitated a wait for a new axle to be shipped from the railroad. The breakdown fortunatley occurred at the camp of the Cottonwood Irrigation Development Company so that the leaving of the load of supplies on the road will not endanger its being tampered with while waiting for the repairs, since the people at the camp are keeping a careful watch over the load.

"A new axle was immediately ordered by the Burney Company and dispatched to the scene of the accident without delay, but upon its arrival it was found to be of wrong dimensions, necessitating its return and the shipment of a new axle. By some unknown cause the second axle was not unloaded from the express car at Opal, but was carried on past its destination which caused another delay. A third axle was telegraphed for and was sent out of Rock Springs by a traveler, which was supposed to have arrived at Big Piney last evening. In a telephone conversation last evening with the Burney Mercantile Company, they informed me that the truck would be immediately repaired and the load forwarded to Kemmerer today. We have, however, met with so many disappointments in the removal of this office that we are not banking very strongly upon its arrival today. However, we are living in hopes that it will soon put in an appearance.

"As to Mr. Shanley's threat, 'of dealing us all the hell possible', I am of the opinion that no chances are being overlooked by him since on the evening of August 19, after leaving my personally owned automobile in the Pinedale Garage from the date of my arrival until this time, I found that some unknown person had turned on the batteries of my car which totally exhausted them, and they had filled the gasoline tank with water which caused a confusion and considerable trouble in getting the car in operating condition again. At this time, however, I did not discover that further molestations had been made on my car. On August 20 while scouring the country for a conveyance with which to move the office equipment, I heard an unusual noise coming from the differrntial and transmission gears of my car, and upon examination I found that every vestige of oil had been removed from both cases. While this caused me a considerable delay and inconvenience, no actual damage resulted to the car since fortunately the depredations had been discovered before it was too late.

"Taking it all in all the removal of this office to Kemmerer has been a rather difficult problem but the end is now in sight, and no further difficulties are contemplated from this source. We are, however, working under very adverse conditions since it has become necessary to borrow a desk from a congenial neighbor and also a typewriter for Miss Bayer.

"As soon as the Pinedale load is received and deposited in our new office I will immediately return to Afton, pack that office and bring it to Kemmerer."

We think it's kinda too bad that Charlie Beam couldn't get the typewriter to write some of the language he used when he found the water in his gas tank and again when he discovered he was a little short of oil. Snappy conversational stuff adds so much to the "life" of a story. But since the incident is now "closed" we'll have to do without that part of the story this time.

How Many Oaths Have You Sworn?

Is a man going to be more loyal because of a $5.00 increase in his monthly salary ? Does an oath become worn out in time ? Then why the bother and expense of a new oath every time a rise in salary occurs ?

Take an actual case on the Sierra: A stenographer and typist was appointed at $900 per annum, on temporary appointment pending certification (Oath No.1). He passed the examination and another appointment - probationary - was necessary. (Oath 2). 14 months later he was raised to $960. (Oath 3). Two months later he was written that there was a six-weeks vacancy that he could have, giving him an additional $5 per month for that period. (Oath 4). As it happened, the Washington office did not approve of this use of a "tag end" appointment and it did not go through. Another six weeks passed, the stenographer was raised to $1020. (Oath 5). That was in March; in June his salary was made $1100 (Oath 6). A total of six oaths taken within two years, which meant a certain amount of work for a clerk in San Francisco and one at Northfork, a Supervisor and a District Forester, and one does not know how many individuals in Washington, D. C., not to mention the $3.00 paid out in notary fees and the time of this stenographer and typist used in looking up the notary each time. All to what good ? The taking of an oath of allegiance to his own country whose constitution he would in any case uphold "against all enemies foreign and domestic," has become a joke. In this particular case there was no change in title.

Possibly it is desirable for a civil servant to take one oath of office, but if anyone can find a good reason for a second I should be glad to hear it.

This was an extreme case, but there have been others almost as absurd. For example, one Forest Ranger appointee after serving a short time at $1100 was given a temporary increase to $1200 during the 3-months' furlough of another man. When the other man returned to duty, man number one was demoted again to $1100. The demotion had been an understood thing and brought no ill feeling, BUT a third oath of office was called for, and Sanford paid 50¢ and several hours' ride for the privilege. How much was his feeling of loyalty to a country that asked for that second and third oath increased by the process ? How much better work did he do ?

Is there no way to cut out such a preposterous and useless proceeding?

JULIA T. SHINN, Principal Clerk,
Sierra, N. F.

Yes Mrs. Shinn there is a way and we are already hot on the trail. We are working now to find whether it is a matter of law or merely interpretation of law that is responsible for the absurd situation. If it is interpretation we will try to get it changed. If we cannot get it changed or if it is held to be a matter of law then we will seek legislation and I think we can get it. No sane man can hold that Congress ever intended to have oaths repeated until they become a farce.

It would do no harm if similar concrete cases were reported through the District Forester for use in presenting our case.

ROY HEADLEY.

Washington Notes

A. F. Hawes has submitted his resignation from the Forest Service effective October 1 to accept a position as Forester for the National Association of Wood Turners. In his new position Mr. Hawes will attempt to increase the production of the different kinds of woods used by the turners, especially hickory, and will work out improved methods of utilization. His new address will be South Bend, Ind.

The Forester has approved the recommendation submitted by the Madison Section of the Society of American Foresters for the purpose of securing closer contact between the Madison Laboratory and the Districts. Research will be responsible for carrying out the policy. Mr. Clapp has been appointed chairman of the proposed committee and will make recommendations to the Forester for the appointment of the other four members.

Mr. John B. Cuno has been appointed to succeed Mr. Mathewson as Engineer in Forest Products, Office of Research. Mr. Mathewson has returned to the Laboratory.

Cool weather in the field continues to cause the return to Washington of those men who have been out during the summer. H. S. Betts, Jos. Kittredge, Jr. and C. S. Smith are once more on deck after varying stays in the field.

Col. Graves has opened an office at 1731 H St., N. W., Washington, D.C., and will be glad to have members of the Service call on him there.

Forest Products Laboratory Notes

A representative of the H. L. Stevens & Company, designers, builders and operators of a chain of hotels and restaurants, visited the Laboratory September 10 in search of a trained forester to head its Forestry Department. The company has land holdings in southwestern Wisconsin, aggregating about 2,100 acres. Approximately 1,300 acres are under cultivation and in pasture. The remaining 800 acres are in timber and scrubby woodland. The company desires to apply a system of conservative lumbering or practical forestry to about 500 acres of the best mixed hardwood and pine timber with the idea of furnishing wood products for the ranch and yet convert the stand into normal stocking with future sustained yields; and in addition, reforest artificially the other 300 acres of scrubby woodland and brush. The representative offered $1,200 to $1,500 per year and a house, garden, and wood fuel, beside the opportunity to buy all fruit and farm products at actual cost. He stated it was equivalent to $2,000 to $2,200 per year and signified that a short course forester or ranger with experience in logging, milling, and planting would be accepted for the job.

Should any of the Bulletin readers be interested, no doubt the company would be glad to answer requests for information. Its address is 30 N. Michigan Avenue, Chicago, Ill.

Magnus Swenson, who was formerly food controller of Wisconsin, has offered fifty acres of forest land at Baskerville Heights for use as a forest experiment station. The woodland runs down to a beach on Lake Mendota and contains about eight species of conifers and fifteen species of hardwoods, some of which are affected by various kinds of tree diseases. Mr. Swenson's offer was made to Mr. Ernest E. Hubert and Mr. Marvin F. Hartman. Mr. Swenson is deeply interested in forestry, and he would be glad to cooperate with the Laboratory along certain lines.

District 1 - Northern District

Scaling Policy

Lagging poles, when loaded on cars, can be measured in cords in somewhat less time than is required to count them, and it is suggested by the Deerlodge Forest that some expense could be saved by selling lodgepole pine lagging poles 12 - 16 feet long by the cord instead of on a piece basis. This involves a fairly accurate determination of a flat stumpage price per cord equivalent to the piece rate which has been established.

District 3 - Southwestern District

"Is the work more interesting than money? Mr. Edison never tries to hold a man who wants to leave in order to get a higher salary elsewhere. His theory is that unless he can make the work we are trying to do here fascinating enough to keep a man interested then we deserve to lose him. Edison feels that work is more interesting than money, and that the man who finds work which grips him and engrosses him gets far more out of life than any man whose chief interest is in the amount of money he can make." (Forbes)

Richard A. Hanna, Democratic Nominee for Governor of New Mexico, was a Ranger on the Prescott Forest about 1901. His brother was at one time a Ranger on the Gila.

"Speaking of Fires: This office is in receipt of a letter on August 4 reporting the service rendered by the Boy Scouts in extinguishing a fire close to the foot of Mt. Union. A dead pine tree had been struck by lightning but before any great damage could be done the Boy Scouts had cleared the brush and after three hours' work had the fire completely under control. Thanks to the Boy Scouts for their cooperation. That is what we need at all times, especially during the fire season." Prescott

"Billy Brown, Forest Ranger on the Modoc in California, has persuaded a local real estate dealer to print fire prevention propaganda on his envelopes. There's no limit to the possibilities in this direction, and the field is open to all Forest officers - supervisors, rangers, clerks. Warm up on a few personal friends in business in your community - then tackle the bigger game. Educational and publicity work is not entirely a specialized function of the District Office."

The tourist business on the Santa Fe has been rushing this year. The little ranch hotel at the Rito Frijoles has been swamped all summer, the number of visitors being estimated at three times that of any previous year. A thriving pack trip business has been carried on during the summer by several parties on the Jemez, some outfits numbering as high as twenty-five people. On the Pecos, the three well known resorts at Valley Ranch, Irving's, and Mountain View have been oppressed by prosperity and reservations were booked months in advance. At Valley Ranch, a sumptuous, two-story, adobe and cement structure, equipped with all modern devices for "roughing" it in the wilds is nearing completion. Ranger Johnson of the Panchuela, reports meeting three large tourist pack outfits on a single Sunday this summer in the high Pecos country.

A new Government railroad executive and his family have returned for their third consecutive year to a resort on the Santa Fe. The place is in a small native adobe town. The man was asked just what attracted them to the locality outside of the home-like atmosphere of the resort. "Well,"said the visitor, "I'll tell you in a word, and the word is history. Coronado stopped here in 1598, established a settlement and - nothing has happened ever since!"

A tip to typists from "System": In making carbon copies have carbon paper extend about one-half inch below bottom of paper. One movement separates carbon and finished letters, and the usual trouble in extracting the carbon sheets is avoided.

"Deputy Supervisor Kissam and Ranger Cook spent two days this week making an appraisal of fence posts near Mt. Washington, in response to an informal application for a sale of 12,000 posts. They found the posts and incidentally a good deal of cedar suitable for pencil wood. Two inquiries about pencil wood have been received recently, and a representative of an Eastern company spent some time on the Forest recently looking over the cedar timber." Manzano.

District 3 - Southwestern District (Cont.)

Denver Newspaper item: "Lewis Alsbury, a tourist, speaking by wireless telephone from the forestry service lookout station on top of Twin Sister Peak in the Colorado National Forest yesterday, talked to his wife in Chicago, forestry officials announced here today."

Beats all the competition between districts in rendering up to date service to the recreation seekers.

This is the way the Forests were administered in 1915: 16 Supervisors; 22 Assistants; 28 Clerks; 138 Ranger work. Total, 204. Twelve of these were solely for timber sale administration. For 1921, we have 14 Supervisors; 20 Assistants; 29 Clerks and 150 men on Ranger work. Total 213. Twenty-seven of these are solely for timber sales or Forest Management. Cost of sales have increased about 260 per cent, while commercial sales increased about 60 per cent.

When compiling monthly Service reports, don't let the unclassified column worry you too much. Its normal pulse should be between 50 and 60 for a Forest, depending on the size of the field force as compared with the Supervisor's office. While for the Ranger, it should hover around 40, unless he works in the field on Sundays and holidays and is too busy to take annual leave. A Forest with 3 in the office and 5 in the field for normal work would reach 60 per cent unclassified; while 4 in the office and 10 in the field would be the same. But changed to 3 in the office and 10 in the field, the normal would be about 54 per cent. Since unclassified is eventually prorated among the classified activities the surest way for results worth while is to follow instructions closely. Then the Forests may be compared with a fair degree of accuracy.

"Ranger Johnson received 375 road and trail signs this spring. Practically 330 of this number have been posted, and the remainder will be up before fall. Aside from this a good number of 1919 signs have been posted this summer. This has taken a lot of work but no opportunity has been overlooked for the posting of these signs." (Santa Fe)

A weird wind phenomenon was observed one day this summer at the Fort Valley Experiment Station. Visually it was a vertical spiral of whirling brown about 15 feet in diameter and possibly 1000 feet high that oscillated back and forth for about ten minutes. A rippling sound accompanied the display. There was very little wind at the time at the Station. An illustrated article on the subject by Mr. Haasis, will be printed in the monthly Weather Review. Has. is a total abstainer in a dry state.

"Trotsky"

The Station at Fort Valley
Will try any strange exotic
Botanic, ethnological,
Or general biotic,
So they've picked us out a MONSTER
From the Gila's varied lotsky;
A wild and wooly motor-truck,
Whose given name is "Trotsky".
It cavorts across the landscape,
Irrespective of what's in it,
At the reckless, breathless gallop
Of a quarter mile a minute.
She is lanky, long, and haggard,
And her beauty-spots are nil;
But she surely is a wizard
On a sandbank or a hill.

F.W.H.

District 3 - Southwestern District (Continued)

Following a similar idea originated in District 2, we have erected on the new Albuquerque Municipal Camping Grounds, a large, framed, glass-enclosed map of the Southwest, showing travel routes and National Forests. Around the margin of the frame is publicity, fire and camp sanitation matter. The sign is supported on 4 x 4's, has a small gabled roof over it and is painted and lettered in the standard sign colors.

"Well, the drop in wool worked one change. The Navajos are going back to blanket weaving, and now the tourist will get something for his money besides scenery and smell when he visits the Indian reservations." (The Southwestern Stockman-Farmer)

"Ranger Ray M. Stewart competed with the Great Notorious Cheyenne Kaiser, World's Champion Bronco Buster at Payson, August 19-20, making first on the first day's riding and dividing the money equally with Cheyenne Kaiser in the finals. The Tonto is willing to back bronco buster Ranger Stewart against any bronco twisting ranger in the Southwestern District. 'Put up or shut up.'" (Tonto)

"Ranger and Mrs. Brubaker have been especially successful in flower culture at the Mesa Station this season. Their flowers have grown in such profusion that for the past six weeks a bi-weekly supply has been furnished the Fort Stanton Hospital." (Lincoln)

District 4 - Intermountain District

Bad Characters on the Trail Crew: We are having our ups and downs over the hiring of men for the trail crew on Ranger District No/ 6. Ranger Mink called at the office during the week and gave us a strict warning to raise the standard of character in regard to the men we were sending him. It seems that the last two men sent him beat the driver out of his fare for taking them out, would not work when they got to the trail camp and walked off with the trail foreman's (Mr. Toyn) rifle and also owed money that they had borrowed from some of the other workers on the trail. Mr. Toyn was able to recover his rifle after a short pursuit of the men, whom the other workers on the trail stated were a couple of good for nothing Bowery stiffs.
- Humboldt -

Work of Ranger West Appreciated: We were glad to receive the communication from the American Fork Commercial Club, expressing "its appreciation of the good and efficient work of Ranger West." It helps to know that someone appreciates one's efforts even though a Forest officer's duties do not put him in the lime-light all of the time.

Ranger West reports that his Timpanogos Trail has not been allowed to cool off since it was started. Approximately 1500 people have made the climb already. The Mutual Dell Hut in American Fork Canyon has been used thus far by 700 people. - Wasatch -

Cooperation Comparable with That of Pioneer Days: Ranger Davis reports very successful cooperation with residents of Fish Haven, Idaho, who have donated work on the Fish Haven Canyon road to the value of about $500.00. Seven bridges were rebuilt, and in addition about 300 yards of new road were constructed. This sort of cooperation used to be a regular thing in the pioneering days of this section. - Cache -

Owing to the lateness of the season it is doubtful that the formal opening of the Ephraim-Orangeville Road will be held before 1921. The road work is almost completed; the road workers are now putting in drains, surfacing, and adding finishing touches to the road. A three-day celebration on the top of the mountain is being planned for just as soon as the road is open to car travel in 1921. - Manti -

District 4 - Intermountain District (Continued)

Mr. Scott recently sent one of the new maps of the District entitled "101 Recreational Attractions of the Intermountain Region" to Mr. H. W. Niemeyer, Secretary of the Idaho State Automobile Association and also Secretary of the Nampa Chamber of Commerce. Mr. Niemeyer requested this map for use in connection with a State Automobile Association Exhibit at the Idaho State Fair. We understand that the State Automobile Association is contemplating the preparation and issuance this winter of a series of automobile strip road maps. We are endeavoring to establish a basis of cooperation with the Association in working up this material with a view to having these road maps carry a certain amount of fire prevention and other National Forest material. Here is one place we could use those road logs mentioned in yesterday's News, to excellent advantage.

Considerable activity is being shown by leading citizens and the county commissioners of San Juan County in making plans for the construction of an auto road to the Natural Bridges. A committee was selected to make an investigation of the project and its report shows that a feasible road can be constructed at a cost of $40,000 to $50,000. The county has pledged $14,000 for the project and has sent representatives to the State Road Commission, Bureau of Public Roads and the District Office of the Forest Service for financial aid in the proposition. The proposed location crosses the South Elks Plateau in the La Sal National Forest, and will make accessible approximately 25,000,000 feet of mature yellow pine saw timber. It will also open up a desirable summer recreation area on the Forest. Coincident with this activity a Colorado Aircraft Company has recently announced plans for making passenger carrying trips from railroad points to the bridges. It is their intention to make a landing field and suitable accommodations for tourists in the proximity. They state that the trip can be made each way in one hour and fifteen minutes. Considerable saving of time for the tourists would be made in this way as it takes at least a week to make a trip from the nearest railroad point to the bridges by present means of travel. - La Sal Monthly Newsletter -

District 5 - California District

Mulligan: Sunday night, the last night of the State Fair, a big mulligan, cooked over the camp fire in the Forest Service booth, was served to some 250 exhibitors. Materials - potatoes, onions, garlic, celery, macaroni, Italian paste, corn, peas, beef, "wienies", tomatoes - were donated by the various counties. It was put on the fire at 2 p.m. and was served from 7:30 to 10 p.m. with bread and butter. It was eaten from cups, mostly home-made from tomato cans, with big spoons, and proved to be a real "camp" affair. A success? Every bit of it. Calls for "seconds" were as numerous as were praises for the concoction and the chef - Ranger W. D. Marx. At the conclusion of the repast three rousing cheers were given the Forest Service, and many of the exhibitors expressed the hope that the affair would be made a permanent institution at the State Fair each year.

Prevention of Rust in Tin Ware: Results of the past season indicate, according to District 1, that a light application of American Liquid Petroleum will prevent rust from accumulating on tin ware stored in ware houses. The oil is applied with a cloth wrung out as dry as possible with the hands. No heating is necessary in cold weather, and it is unnecessary to wash the tin ware before using, since the coat of oil is light and is not objectionable in taste or smell. Three gallons will oil a mess equipment for 2500 men. Cost is $2.85 per gallon.

Valuation of Cut-Over Lands: On Sept. 16 a number of forest officers will sojourn to the Sierra Forest to look into the matter of valuation of cut-over lands which the Madera Sugar Pine Company desires to exchange for stumpage. The Company has made a definite proposition to the Service on a valuation basis which is a new one and since any step taken in this initial exchange will constitute a precedent for the methods and procedure to be followed in future ones it has been felt advisable to go into the matter very carefully. The District Forester and Mr. Barrett will join Supervisor Benedict and Mr. Sanford and it is hoped also to get in touch with Mr. Woodbury, who at present is in the field with Assistant District Foresters Ames and Marsh from Portland and Albuquerque respectively, so that these 3 three men can be in on the conference.

District 5 - California District (Continued)

They Wouldn't Fight Fire: State Ranger Frost recently secured two convictions for refusal to fight fire. Ben Rhodes, of Forest Hill openly defied the fire warden and as a consequence was fined $50. Edward McFadden of the same place failed to show up when summoned to a fire and received a fine of $10. Both cases were taken before Justice John Davis at Auburn. We are not alone in our efforts for Law Enforcement. The State officials are also going after them.

Bugs and Bugs: The bark beetles are not the only bugs which cause trouble to timber in these days. Most forest officers know of the trouble caused by the teredos and other shipworms to wooden piling in San Francisco Bay and other ocean harbors. It has recently developed that the series of dry years and the diversion of water for irrigation purposes from the upper Sacramento River has so reduced its flow that tidewater has backed farther and farther up the river from the bay. With this tidewater has gone the teredo so that the docks of the U. S. Arsenal and the S.P.R.R. at Benicia, as well as those of the oil companies and sugar refiners in that neighborhood, have been badly attacked where no such attack was ever known in the past. The N.W. Pacific bridge over Petaluma Creek in Sonoma County, 14 miles from where that stream enters the bay, has also been riddled by teredos.

The only real line of defense against these bugs so far developed is through creosoting of piles. Creosoted piles now cost around $1.00 per lineal foot or $100.00 apiece for deep-water piles. At that rate not many forest officers will invest in any very large docks and the companies who have them are scratching their heads pretty hard. A thorough survey of the whole shipworm situation in San Francisco Bay is being undertaken by the Forest Products Laboratory and the local Office of Products in cooperation with a number of these companies.

Comments of the Observant District Officer: Can a patrolman fight fire with his bare hands? Obviously not. Yet we repeatedly see men on patrol without shovel or other tool, although a rifle is a frequent companion in the deer season. I have mentioned this fact to several supervisors. Should not some general rule be established? A few years ago we required certain things in this line, but we seem to be slipping.

Why is a Sawdust Pile?: Conservation boosters have for many years waxed eloquent over the waste involved in the sawdust piles and hog burners of the American sawmill and many schemes have been proposed to make use of them. For the most part, the lumberman have been "from Missouri". A meeting of big lumbermen in San Francisco during the past week, however, has actually authorized the spending of good money to find out what good account their sawdust piles can be turned to. The Forest Service will cooperate in this inquiry and lumbering may soon be like the packing industry, in which everything is used but the squeal.

District 6 - Northern Pacific District

The committee of five appointed by Governor Olcott of Oregon to investigate the need of legislation to preserve timber along highways, lakes, waterfalls, and other scenic areas, reports that the success of this enterprise must depend upon the public spirit of owners of large timber tracts adjacent to the scenic areas, and other cooperation. Specific recommendations of the committee are that this program of forest preservation should be in charge of an expert forester, under the state highway commission, and that financing of purchases should be borne by private owners, individual contributions, and communities. At the recommendation of the committee, Governor Olcott has requested temporary cessation of logging by the Crown-Willamette Pulp and Paper Company between Seaside and Elk Creek, on the Cannon Beach road, until a conference between representatives of the paper company and of the state can be held. A representative of the paper company wrote to Governor Olcott expressing interest in reforestation and preservation, but asserting that the burden of expense should be assumed by state and federal agencies and not by individuals or corporations. The Governor has asked Mr. Chapman, of the Western Forestry and Conservation Association, Mr. Elliott, State Forester, and Mr. Cecil to act with the committee of five in devising a plan for preserving the timber along the Cannon Beach road. Unless some other way is found to save this timber, at the next session of legislature the Governor probably will recommend legislation by which it may be preserved. Timber interests are said to be strong for Governor Olcott's plan if adequate compensation can be made for timber preserved.

District 6 - Northern Pacific District (Continued)

National Forest Examiner Adam H. Wright has returned from Alaska, where he inspected the extensive land classification work in progress on the Tongass. Mr. Wright cruised around Prince of Wales Island in the Forest Service boat "Vamoose". He says that practically all of the agricultural land in the Forests of southeastern Alaska is confined to grass plots of from one-half acre to three acres in extent, usually situated at the mouth of an inlet that controls all the timber resources of the immediate locality. These small tracts never could make homes, but in some instances might be used for gardens where a limited supply of vegetables could be raised. As a rule, they are not lands to throw open for settlement under the homestead laws.

The inspection extended from Wrangell south and covered the territory included in last year's work and a large portion of this season's work. One classification party covers approximately four million acres during a field season. To date the field work has been completed on approximately 12 million acres, and next year will see the completion of the extensive classification of the Tongass Forest.

Forest Examiner Walter Lees reports that reforestation on the old Breitenbush burn, on the Santiam, is a success. In 1919, 56 acres were planted to western pine and noble fir, and in 1920, 400 acres were planted to Douglas fir, western white pine, noble fir, and silver fir. The restoration of this burn is important from a scenic standpoint because it is traversed by the trail that leads to Jefferson Park. On the Battle Axe area, trees planted in 1913 five feet high and growing vigouously were found while 500 acres of Douglas fir and western white pine planted in 1918 are reported to be doing equally well.

District 7 - Eastern District

Parties from June 29 to September 3 inclusive who made use of the Dolly Copp public campground on the White Mountain National Forest were from countries, states and territories as follows:

United States: New York, New Hampshire, Massachusetts, California, Illinois, Maine, New Jersey, Minnesota, Pennsylvania, Vermont, Texas, Virginia, Connecticut, Rhode Island, Michigan, Iowa, Florida, North Carolina, District of Columbia, Hawaiian Islands.

Great Britain: England, Scotland, South Africa.

District 2 - Rocky Mountain District

Mr. Douglas, Inspector of Grazing, who recently returned from an inspection trip on the Hayden and Arapaho Forests, during which he attended a meeting of the newly formed Association of State Agricultural Experiment Station Officers in Colorado, Wyoming, Montana, Utah and Idaho. This meeting was called for the particular purpose of considering grazing problems in these states and the activities of the experiment stations in meeting these problems. One conclusion which all of the representatives of the State institutions seemed to have reached and which was kept well to the front in all the discussions was that the State institutions have been neglecting an important need of the agricultural interests in this section by paying so little attention to the problems of protection and improvement of the grazing ranges and methods of handling stock thereon. This conclusion seems to have been brought to a head by a feeling, which has lately become more prominent, that dry farming on the lands which remain to be homesteaded is, in a big majority of cases, not successful, and that these lands would yield higher returns, year in and year out, as purely grazing lands. The Forest Service was mentioned a number of times as being the only institution which has paid any attention to the problems of range management and the records of its work are at present about the only source of information to which the State institutions can turn in their desire to pay more attention to this work.

In connection with the inspection of the Hayden and Arapaho Forests, Mr. Douglas says that the results of the extremely bad climatic conditions experienced last winter and spring are apparent. Cows, dry as a result of heavy losses in calves last spring, are seen in exceptionally large numbers. These cows, of course, are fat and many of them undoubtedly will go to market this fall to help the stockmen in meeting the financial stringency of the present time. These cows would not ordinarily be marketed.

Tight money is also having its effect on the sheepmen. Unable to market their wool, due to the demoralization of the wool market, the sheepmen of the Red Desert of southern Wyoming are preparing to ship very heavily and then risk the winter conditions on the Desert range without emergency feed. Emergency feed has always been shipped into this country in large quantities every fall. This year, money cannot be obtained to purchase the feed and the sheepmen say that if it is an open winter on the Desert, they will probably pull through without heavy loss; if it is not such a winter, the earnings of years will be wiped out in a great many cases.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

September 27, 1920.

The Movement for Public Shooting Grounds and its Relation to the National Forests.

Two years ago, in writing for sporting magazines, one could not mention public shooting grounds without carefully explaining the meaning of the term. Today it is hard to find a sporting magazine that does not contain several articles about public shooting grounds. What was only recently a vague idea in the minds of a few has become a leading issue in American Game Conservation.

It is important that Forest officers understand the meaning of this sudden change, because it is vitally connected with the National Forest game problem. The long and short of it is that throughout the country as a whole, the demand for shooting has overtaken the supply, and accordingly shooting privileges have acquired a commercial value. The preliminary symptom of this process is the "No Hunting" sign on private property. The next symptom is the leasing of duck lakes and other highly concentrated natural shooting places for money. The third symptom is the artificial planting of duck feeds and quail feeds, winter feeding, and other investments of time, brains, or money in improving the productiveness of shooting grounds. The next symptom is the beginning of commercial "game farming". All these symptoms are to be found over a rapidly increasing area. They spell the beginning of wholesale commercialization of shooting privileges on private lands throughout the nation. They spell the end of free hunting, and the beginning of the day when a man must pay for his hunting or go without. That is, he must go without unless public shooting grounds are provided at public expense.

The foregoing process has so far mostly affected small game, because the small game country is the farming country, i.e., the country of high land values. The commercialization of a natural resource generally begins on lands of this class. But there is nothing under the sun that can prevent the process from extending to the low-value lands, i.e., the forest land, the big game country. Sure as the Lord made sour apples, the time is coming when the free big game hunting on private lands in the Lake States, the eastern mountains, and the South is going to disappear, and the citizen who depends on it for health and recreation is going to have to pay a stiff price for his hunt, or come to the National Forests. Many will pay, but many more will not have the price. Those who don't have the price are going to crank up their jitneys and come west. They are coming in numbers probably far beyond anything we so far ever dreamed of. And the big question confronting us is this: what are we going to have for them when they arrive?

Sportsmen who are private citizens often frown on non-resident hunters as a nuisance and advocate keeping them out by a barrier of high license fees. But we as federal officers have no option but to try and provide for what the public needs and wants. And if we are to live up to our reputation, we will provide in advance, because a game supply can not be built in a day. We can not dodge the fact that the western forests will support a much larger and a much more productive stock of game than we now have. We can not dodge the fact that we, as scientific men, ought to know how to put it there. We could dodge the responsibility because we work under a system of divided jurisdiction and doubtful local sentiment. But in the end, foresters do not dodge responsibility. We must cooperate with the states so that the ill effects of divided responsibility will disappear, and must remake local sentiment to what it ought to be. But it is high time that we make a real start.

Maybe these predictions of a deluge sound a little previous. But remember that in two years the public shooting ground question with respect to small game has grown from a nothing to a proposition, now being seriously discussed, for raising a fund of two or three million a year for buying duck ponds. Big game is next. Are we going to be ready?

ALDO LEOPOLD

Proposed National Botanic Garden and Arboretum

The Forest Service has been represented lately at several meetings of an informal committee comprising members of various bureaus of the Department of Agriculture which is presenting its views in regard to the building up of a great national botanic garden in the suburbs of Washington. If the present movement which is nation-wide in scope succeeds, an opportunity will be afforded for an arboretum on an extensive scale. It is obviously very desirable to have such an arboretum for native and exotic trees at the national capital in connection with forest research and management. The other bureaus most interested are the Biological Survey, in connection with wild bird life, and the Bureau of Plant Industry in the matter of agriculture and floriculture, and building up an exhibit of foreign plants, many of which are received at the capital but have to be shipped out on account of lack of available ground for planting.

The plan is backed by the Fine Arts Commission, and looks to the acquisition by the Government of a tract of about 400 acres known as Mt. Hamilton and Hickey Hill, located in the northeast section of the City, adjacent to the west bank of the Anacostia River, where extensive river improvements are already under way. This tract, if added to the present 800 acres, more or less, of Government lands lying along the Anacostia and Potomac rivers will bring the total area up to about 1,200 acres. The point of immediate interest consists of proposed changes in the present engineer's plan for the Anacostia River Park, by which the present wild rice lands, instead of being filled, will be retained partly as a bird refuge and partly converted into a water garden along lines that will prove harmonious to the development of what is expected by many to be the world's greatest botanic garden. The tract under consideration ties in with the National Capital Forest of more than 100,000 acres, the creation of which has been proposed for a number of years.

The Bureau of Soils, has made a detailed study of the tract and has found approximately 27 different types of soil to which may be added 3 types on Government land along the river making a total of some 30 distinct soil types. It is stated by one of the Government experts that probably nowhere else, with one possible exception, does such a diversity of soils occur near any national capital.

Part of the tract is heavily wooded and contains at least 36 species of forest trees, according to a list prepared in 1917 by Dr. Ivar Tidestrom. Thus a good basis already exists for an extensive arboretum. The altitude ranges from about 3 feet to an elevation of 239 feet, this being next to the highest point of land in the District. The whole plan appeals strongly to those interested in having an exhibit of forest trees close at hand for the thousands of visitors to the national capital.

On May 21, 1920, a hearing was held before the Joint Committee on the Library, as a result of which Senator Brandegee on June 2, as Chairman of the Committee, presented to the Senate a land acquirement bill providing for the taking over of the Mt. Hamilton tract. It had two readings before adjournment and its passage at the next session is confidently hoped for.

The hearing brought together some notable people interested in scientific research and civic improvement, including Dr. Britton, Chief Director of the New York Botanic Garden; Dr. Fairchild in charge of the Office of Foreign Seed and Plant Introduction; Dr. Coville, the Botanist in the Bureau of Plant Industry; Col. Ridley in charge of the Office of Public Buildings and Grounds; Mr. Chas. Moore, Chairman of the National Fine Arts Commission; and Mr. Frederick L. Olmsted, Landscape Architect.

The finding of this Committee should be of wide interest, not only to Washington but to scientists, and the public at large, for such a garden and arboretum properly equipped and administered affords a good many research possibilities in studying rate of growth and in testing out new species, and leads to results which are of far-reaching importance in the economic life of the nation.

W. R. MATTOON

A Planking Plan that Worked

Every little while something comes in which shows up the character of the work done by the Old Timers in the early days of the Service. Not all of it was successful but a whole lot of it was exceptionally good. Here is a sample of the latter sort.

Oswego. N.Y. Sept. 17, 1920.

Deps. of Forest Service,

Washington, D.C.

Gentlemen:

Through the courtesy of your Department this Company was furnished "Planting Plan," your No. 398, which was prepared by Mr. Allen S. Peck, Forest Assistant, in 1906.

During the years 1907 - 8 and 9 we planted between 3 and 400,000 trees, more than 200,000 of which were planted in the spring of 1909. The results proved almost phenomenal, and have been pronounced the finest seen in this country or Europe by Professor Moon of Syracuse University.

Having guided us so well, we feel like applying to you for advice as to "Future Treatment". The book of directions originally sent says:"The plantations will require no care until 15 or 20 years after planting, when thinnings should be made and the most vigorous trees removed."

We are advised that this process should commence now, after a lapse of but 11 years. Many of these trees are now above 20 ft. in height, and we await advice of your Department before reaching a decision in this matter.

We are, with respect,

Very truly yours,
GREAT BEAR SPRINGS CO.
F. A. Emerick, President.

Oil Prospecting Permits

The following instructions were given by the Acting Forester to the District Forester on September 22: (phosphate,

> The Act of February 25, 1920 (Public 146), "To promote the mining of coal, oil shale, gas and sodium on the public domain", including National Forests, provides for the granting of prospecting permits for a definite period, under which permittees are authorized to go on the lands to prospect for the minerals specified in the permit. The permittee does not have a right to use the land for any other purpose and the permit contains the following paragraph:
>
> > "This permit is granted on the expressed condition that if any of the land covered thereby is embraced in a forest, reclamation, power or other withdrawal, or is segregated for any particular purpose, operations under this permit shall be so conducted so as not to interfere with the administration and use of the land for the purpose for which withdrawn or segregated to a greater extent than determined by the Secretary of the Interior to be necessary for the most beneficial use of the land."
>
> Since this permit merely gives the right to prospect, with a preference right of securing a lease in case minerals are discovered, this office feels that it does not differ substantially from the right mining locators have hitherto had respecting the locations of mining claims within the National Forests, and, therefore, there seems to be no good reason why the Forest Service should cause a field examination of the lands to be made before giving its consent to the granting of the desired permit. The practice will, therefore, be followed of not requiring a field examination but on receipt of notice from the General Land Office of application for a permit, the Forester's office will inform the Commissioner of the General Land Office that the Forest Service has no objection to the granting of a prospecting permit provided it contains the paragraph above mentioned. The letter from the General Land Office describing the land, with the usual copies of the letter to the Commissioner, will be referred to the proper District Forester, who in turn, will furnish copies to

the Forest Supervisor. The General Land Office will be asked to advise the Forest Service of the granting of any permits so that the field officers of the Forest Service may be informed of their existence and therefore the persons named in the permit have a right to conduct prospecting operations on the Forest. Should the prospectors discover minerals and later apply for a lease, the General Land Office will be asked to advise the Forest Service of such application in order that it may be given an opportunity to make such suggestions as it considers desirable for the insertion of conditions in the lease looking to the adequate protection of National Forest interests.

The foregoing instructions relate to oil and gas prospecting permits only.

If there should be any unreasonable interference on the part of prospecting permittees with the use of National Forest lands under the regulations of the Department of Agriculture, report of such interference should be made through proper channels to the Forester's office in order that the matter may be taken up promptly with the Department of the Interior.

Impressions of One Who Took the Box Course at the Forest Products Laboratory

The preliminary trip through all departments of the Laboratory on the morning the course commenced opened the eyes of all of us as to the extent of the work being carried on. We saw for the first time how thoroughly wood was being analyzed, and we knew that the course would bring out points in box construction we had not dreamed of.

The first thing that struck us was the businesslike way of starting the work. Drop tests were made on various styles of wooden boxes until they failed, and each individual kept a record of each box on sheets prepared for the purpose. This businesslike attitude continued throughout the week, and notes were kept and curves drawn in the nail pulling, compression, and drum tests on all the different types of containers. Large crates of machinery weighing 375 pounds, wire-bound boxes, steel strapped boxes, cardboard containers, of different sizes and styles and thicknesses of sides, tops and bottoms, were tested and noted so that at the end of the course each individual had a complete record of what had happened. This, along with the notes given out daily, made a comprehensive reference work on box testing.

One of the most interesting features of the course was the identification of woods. Hand lenses and jack-knives were busy trying to tell the difference between ash and chestnut, red gum and black gum, and white pine and western yellow. The discussions among the men brought to light many good points of interest too. The whole course appealed very strongly to those taking it because it was all so practical.

We soon realized that the Laboratory and its personnel form a live wire industrial organization whose work is being carried on along scientific lines with a buoyant, youthful, active spirit not often found in either the industries or Government bureaus. The enthusiasm and energy that secured such fine results during the war are still very much in evidence and it looks as though these qualities are going to be lasting.

The work being done at the Laboratory speaks for itself. It speaks also for the people who do it. They are a happy combination of both technical and nontechnical men and women who keep on the job from 8 in the morning until 4:30 in the afternoon. There are scientists who go after the needle point detail of things; there are those who generalize and do the practical cooperative work which applies research to industry, and there are those who do routine tests and tabulations. A large part of the last named phases of the work is handled by girls and nowhere can you find girls "using their heads" to better effect than they. The mysteries of the slide rule are easy for them; testing machines and transits cause them no fears; while interviewing heads of departments for the progress of projects and guiding parties of visitors is pie for them. The men, however, hold the balance of power and plan and direct the work and see that it is done. Along about 4:30 they throw aside serious matters and in 5 minutes may be on the diamond playing a game for the rubber in the Pulps-Chips-Veneer-Wing league, running off one of their tournament matches on a University tennis court, or they may be on the lake sailing, fishing, or starting on a picnic. Picnics in Madison are as abundant as quills on a porcupine's back and the whole Laboratory force indulges in them once a month during the summer. We of the box course were fortunate enough to be invited to one.

One goes to the Laboratory with a feeling of joy and leaves with a feeling of regret. He who leaves it without imbibing some of the spirit of the organization must indeed be hard-shelled. JNO. B. CUNO

Supply Depot and Purchasing Agents: Attention.

Editor of the Weekly Bulletin,

Washington, D.C.

Dear Sir:-

It is suggested that the camera and tripod cases be equipped with a broad comfortable strap, either web or leather, say 2 in. wide, at least where they cross the shoulder, instead of the present 3/4 in. type. It is believed that here is a way for increasing efficiency along two lines; 1. elimination of an assistant to carry part of the outfit. 2. securing of better pictures, especially those made well along in the afternoon.

Very truly yours,

FERDINAND W. HAASIS

Forest Assistant.

Articles Reviewed and Approved for Publication during August and September.

Title	Author	Place of Publication
The Alabama National Forest	W. W. Ashe	Birmingham Age-Herald
Better Boxes Bring Bigger Business	O. M. Butler	Commercial America
Spur or Sedative	L. C. Everard	Visual Education
The Woods Go West	L. C. Everard	Some magazine of general circulation
Comparative Merits of Different Types of Splices for Airplane Wing Beams	H. D. Frary	Technical magazines
Forests and National Prosperity	W. B. Greeley	American Industries
Dust Spiral near Flagstaff, Ariz.	F. W. Haasis	Weather Review
The Production of Artifically Dense Charcoal	L. F. Hawley	Scientific Journal
Timber Supply and What to do About it	Roy Headley	American Forestry
A Range Livestock Show as an Influence in Improving the Grade of Cattle in Arizona	Robert Hill	Breeder's Gazette
Adaptation in Douglas Fir	J. V. Hoffman.	Ecology
Making One Tree do the Work of Two	George M. Hunt	Trade Journals
Use of Stand Graphs in Determining the Limitation of Cut	Hermann Krauch	Journal of Forestry
Alinement Volume Tables	Hermann Krauch	Journal of Forestry
Service and the Lumber Retailer	L. J. Markwardt	Lumber Journals
How the Farm Forest Helped	W. R. Mattoon	Country Gentleman

Articles Reviewed and Approved for Publication (continued)

Title	Author	Place of Publiaction
Chaparral Cover, Run-Off and Erosion	E. N. Munns	Ecology, or some other scientific journal
Forests and Human Progress	Raphael Zon	Geographic Review
Timber Ownership and Lumber Production in the Inland Empire	D. T. Mason	Book form by Western Pine Mfrs. Assn.
Some Phases of the Range Reseeding Problem as Developed at the Great Basin Experiment Station	A. W. Sampson	National Woolgrower

Forest Service Policies and Their Makers

The longer I live and the more I know of public work, both in the National Government and in the State, the more convinced I am that a better body of public servants than the men and women of the Forest Service, while I was a member of it, has never been brought together. In character, intelligence, devotion, and effectiveness I have never seen their equal and I never expect to.

It was a great chance, a chance for which I shall always be grateful, that we had in those days, and I think it is fair to say we made good use of it. We were the lucky ones, for there can never have been a more fascinating piece of work than we had in the early days, and never one more worth while. Of course the work was hard - there was plenty of dull routine and drudgery, as there is in every piece of work that counts - but in spite of all there was something doing every day. We were putting things over.

The Greeks spoke of a poet as a "Maker". We were "Makers" in those days, making new things, blazing new trails, and there was something epic about it all. I am glad and thankful that I was one of you in those days.

There is this amazing thing to be remembered - that there is not a single item of the policy we made and fought for but time has proved to be right. The policies we laid down and the work we did in giving them effect have borne the test of time unfailingly. There is not a blow hole anywhere. We were sure then that we were right. We can be even surer now.

I shall never forget what I owe to the men and women of the Forest Service of the old days. My heartiest good wishes now and always to every one of them.

GIFFORD PINCHOT

Philadelphia, Pa.

District 2 - Review -

Concerning Clerks' Meeting

Referring to article "What Do the Clerks Themselves Think" on page 8 of Weekly Bulletin August 16:

Since I have never been detailed to the District Office, in fact have never been in that office, I am unable to comment on the benefit a clerk could or would derive in case of such a detail, but it appears to me that it would be good policy and very instructive to a clerk to be detailed to said office, when possible, in addition to being present at clerks' meetings. I know that the benefit derived by myself at the meeting in Seattle last January could not be over-estimated and I would be greatly disappointed should they be discontinued. The different ideas of the various clerks, discussions on all lines of work, and the instructions and information given out by the District office men, Mr. Falck and Mr. Cousins, could not in my opinion be exceeded in so short a time, and I feel confident that every clerk present at the meeting benefited in one way or another by them.

I do not believe that a short detail to the District office would be of as much benefit or as instructive to a clerk as would a clerks' meeting, but if money were available for say a thirty-day detail, then I would say that the detail would in all probability be better than a meeting; for instance, the short time in which a clerk has to go over the many different lines of work with the rangers at a rangers' meeting is of little consequence, but if money were available to detail head clerks to work, say for a couple weeks each year, with the district rangers in their offices, much more efficient service could and would be rendered by said raangers and much time saved in both the rangers' and this office.

Concerning Clerks' Meetings (Continued)

I believe that the real worth of a good Forest clerk is becoming better known each year to all of the officers connected with the District office, and I do not believe that too many advantages can be given said clerk to fit him for the work expected from him. It is, of course, understood that a Forest clerk is not merely a stenographer and typewriter, but that he is really the "spokes of the wheel" so to speak of the supervisor's office. He is the one who should know when this or that is in proper form for submission to your office and I believe every possible opportunity should be given him to fit him for discharging his duties in the manner desired by both the supervisor's and your office.

C. M. ADAMS
Forest Clerk - Olympic National Forest -

Clerk Meetings Better than Details to District Office

In the August 16 issue of the Weekly Bulletin you asked for the opinion of the clerks as to the desirability of District Office details in preference to Forest Clerks' meetings such as were held last winter in this District.

If the clerk could get proportionately as much good from a detail to the Fiscal Agent's office as a Forest Ranger does from going over his particular questions in person with the clerk, it would be beneficial to have at least one detail during the early part of a clerk's employment on a Forest. From my experience of one year in the District Office at Denver, I would not think it at all practicable for a Forest Clerk to spend any time in any office except Accounts and perhaps a day or so in Maintenance, since it would require too much time away from his own work, and, in his position as clerk, he would learn hardly anything he can not learn on the Forest. Would not a detail to Accounts, to be of value, require so much time that the Forest would be seriously inconvenienced by the clerk's absence and his work become so piled up that he would wish he had stayed at home? I believe this would be the case, and that a Clerks' meeting, attended by members of the District Office as last year, is the better scheme.

E. E. WHITAKER - Clerk -
Snoqualmie Forest

Standard Building Plans

This is the day of standardization and while much of it is one-sided and immature we apparently have in the question of ranger station buildings a field that is ripe for standardization provided it is done by a man or men who command the knowledge and technical ability to do the job right for all Districts and all climates.

Mr. Bonner has started the ball rolling by a report of his observations of certain buildings in District 3 against which several valid criticisms could be made. The plans which had been prepared in the District seem altogether too elaborate. As Mr. Pooler says the plans referred to by Mr. Bonner represented an earnest effort to improve on the plans put out by various Districts which were excellent except that they lacked originality or artistic merit. The District 3 plans supplied the artistic merit but went wrong on the mechanical and engineering features.

Mr. Pooler and Mr. Bonner agree that Service-wide standard plans for Forest Service buildings are necessary and desirable provided they can be prepared by a competent architect who will combine the qualities of technical ability, orginality, artistic taste, and hard-headed practicality. Mr. Pooler points out the necessity of making the standard plans include types adapted to the varying conditions and building materials as well as climates of the regions occupied in connection with National Forest administration.

How should we go about the preparation of Forest Service standard building plans? Should we begin by employing an architect to be sent to the field to study conditions and ideas of field men? Or should we detail to the work one Forest officer who has had experience with building and have him formulate the ideas of all Districts and select the best plans hitherto developed ? This material could then be laid before competent architects as a basis for the drafting of complete designs by the architect with the advice of the Forest officer.

Standard Building Plans (Continued)

Another plan would be to leave it as a District matter with the understanding that competent local architects should be secured to draft building plans suitable to each District.

Neither the fluctuations in cost of building materials or present statutory building limitations should be regarded as serious obstacles to standardization. We should be able to formulate minimum specifications in terms of space, number of rooms, rigidity, warmth, etc., which are required to make reasonable provision for our different needs on ranger stations. If our building limitations at any time make it impossible to erect an adequate structure at a given station, then why not wait until we can convince Congress either that a specific authorization should be granted to erect a suitable building at that point or that the general statutory limitation be raised? In the meantime our standard plan is ready for action as soon as money and authority is secured.

ROY HEADLEY

Our Letter Box

September 28,1920.

Editor,

Weekly Bulletin.

Sir:

Zon and "Andy" humbly admit the superiority in leg and lung development of the supervisors and rangers of District 7, though they boast they can beat them any time at the game of five hundred, but they do claim a knowledge of elementary geography, of which it seems sadly true that the editor of the Weekly Bulletin is lacking. In the name of the League of Nations and the principle of self determination of free peoples, we protest against the dictatorship of the Editor in making Finland a part of Sweden, or is it Sweden that is a part of Finland? (Vide "The Paper Industry in Sweden," Weekly Bulletin, September 13). This is a "break" of international proportions. To avoid the danger of some future untoward incident like this which might even lead to serious complications, we earnestly advise the Editor to provide himself at once with some reputable book on elementary geography. We even suspect that he may not know where the Island of Yap is, which may be very serious indeed.

Very truly yours,
ZON

It would be easy enough for the Editor to "pass the buck" and explain how the trifling error referred to crept into the usually impeccable columns of the Bulletin, but he is quite ready to assume responsibility for the mistake. Those little European countries change hands and names so fast these days that not even the map makers can keep up with them. The Geography which Zon suggests would be of no use to the Editor and would probably be out of date anyhow. What he needs is enough geographical knowledge to remember what Forests are in what Districts - and that is some little job in itself. As regards the island of Yap, inside information is to the effect that Zon himself did not know where it was intil he looked it up.

Zon's letter is merely an attempt to divert attention. He boasts of the ability of Andy and himself at cards. Doubtless their scientific minds have led them to an understanding of the manipulation of the "pasteboards" which was too subtle for the unsophisticated Supervisors and Rangers of District 7. If, however, their investigations in the Southern Appalachians had included a study of the intricacies of the sport known as African Golf, it is quite probable that said Supervisors and Rangers would have been able to contribute materially to Zon's and Andy's already large scientific knowledge.

Washington Notes

A request has been received for the help of the Forest Service in securing seeds of "Canadian Poplar" trees which are to be sowed in the Province of Shantung, China. As this species of poplar is not known, at least by this name, the request has been passed on to Clyde Leavitt in the hope that he may be able to identify the tree and furnish the seed.

According to information contained in the letter making the request, the Agricultural Society of Yucheng, Shantung, China, is planting willows and poplars in an old river bed which it is endeavoring to reclaim. It is expected that the trees will aid in preventing sand dunes and will supply wood for fuel. The Society is now selling reeds and wild grass for fuel to the natives. According to the writer of the letter, "One-twentieth of the proceeds of these sales go to the Government, two-twentieths to expense maintenance, two-twentieths to the offices of the Society, and the balance to the investors."

Franklin Reed has returned to Washington after a protracted stay in New England. He reports a decided growth in the recreational use of the White Mountain National Forest which will make it highly desirable for the Service to provide additional facilities for the use of tourists. Mr. Reed is anxious also to see a system of huts and stopping places similar to those maintained by the Appalachian Mountain Club established in the Forests of the Southern Appalachians.

Mr. G. C. Cheyne, Deputy Conservator of Forests in the Indian Forest Service with headquarters at Rangoon, Burma, spent several days in the Washington Office this week. Mr. Cheyne is in America for the purpose of studying logging methods which will be applicable to conditions in Burma. He expects to visit the Southern Appalachians, the Southern Pinery, and also Districts 1, 3, 5, and 6. He is working under the direction of Mr. F.A. Leete, Chief Conservator of Forests of Burma, who succeeded Mr. Gilbert Rogers in that position. Mr. Rogers is now in the United States with a party of English engineers who are studying American logging methods.

Forest Products Laboratory Notes

With a total of more than 70,000 passengers carried during the first year of civil flying in England, there was but one fatal accident. The adaptation of the flying machine to the purposes of trade is but a step, and British officials, declaring they already have conquered the air, find their immediate task now to be the exploitation of their success in the interest of commercial development. During this one year British fliers have carried 116,498 pounds of goods and more than $1,000,000 worth of imports and exports were transported by air between England and the continent.

In Germany there are 25 air transport companies, and the number is increasing monthly. For a country that insists it can not comply with the economic provisions of the peace treaty this is a remarkable industrial development carried in direct violation of treaty obligations and necessarily requiring considerable capital. Great progress is also reported from France, which has designated air attaches in the chief capitals of the world to study and report all matters pertaining to aviation.

Belgium has organized an air ministry and established air attaches in Paris and London. Presumably it would be useless to send these experts to study in the United States, where the lessons of the war have been so soon forgotten. Belgium has appropriated a considerable sum for the development of flying in the Belgian Kongo. France has acquired 5 aerodromes and 24 landing grounds for the use of civilian fliers and is now planning to connect all her colonies with air lines. Italy has appointed air attaches to sixteen countries and large sums of money are being expended to develop flying.

- Laboratory Daily Bulletin -

An addition is being built to the Pulp and Paper laboratory to give more office room. It will be 30 feet long and 12 feet wide and will use part of the parking space just east of the pulp laboratory.

District 2 - Rocky Mountain District

Assistant District Forester Hatton spent portions of August and September on the Gunnison and Battlement Forests and found forage conditions in general, unusually good. Livestock are in better than normal flesh also.

There has been a somewhat lessened demand for range in that locality during the current season viewed from the standpoint of actual numbers of stock placed on the ranges. Although the original applications fully covered the Forest authorizations, several sheep ranges on the Gunnison finally went begging and were unused, and the Battlement sheep authorization is from 10 to 15 per cent short of being filled. There is a pretty strong indication that the 1921 demand will be even less than 1920, because of the necessity of a number of ranchers selling closely to meet their maturing obligations and also to a little discouragement on the part of people who recently started in to make a fortune in the sheep business.

Summed up; increased freight rates, crippled livestock credits, decreased prices on the hoof, and the precarious wool situation have painted a pretty dark picture for the stockmen in most localities. A number are holding off on their sales hoping that the feeder market will improve. The market on this class of stock has been about 3¢ under what it was a year ago; but with lots of feed in the country, as well as corn, it is hoped that these prices will improve.

Added to the general discouragement, there were heavy losses on the Battlement this season from low larkspur, a loss of 300 being reported in one district.

District 3 - Southwestern District

William H. Gill, who has been connected with this office in various capacities for eight years has left for Washington where he has accepted a position with the U. S. Geological Survey. Mr. Gill not only carries with him the hearty good wishes of his many friends in D-3, but his leaving calls for public recognition of his varied and valuable contributions to the progress of this District. His years of hard work have stamped the mark of his talents on many a feature of our administration, especially our forest maps, our ranger station architecture, our landscape plans on recreational areas, and our advertising literature. In addition, Gill contributed much of his personal time to the drawing of landscape and parking plans for several southwestern cities, and his game protection cartoons, published by the New Mexico G. P. A., have been noted and used by sportmen's organizations in many states. Gill's qualifications as a topographic engineer are of a high order, and the Geological Survey is fortunate in enlisting his services.

The Crook now comes forth with a real demonstration in hydraulic engineering. Here it is: started at the spring 270 feet above the discharge point, laid on continuous grade (probably a few traps with reverse grade of a foot or two only) 1.3 miles 1" pipe and 2.5 miles ¾" pipe, a union T and an 8 or 10 inch stand pipe with plugged end every 600 feet as a precautionary measure in case air valves were needed. Water was allowed to flow into the pipe line as laid. When the 3.8 miles of pipe line was finished, it had a flow at the discharge end of 10 gallons per minute, and when hydrant is closed Ranger Chipman says that by removing the first air valve plug 600 feet back, a column of water 20 feet high will shoot from the pipe. That water flows this distance confined in small pipe without air valves open is probably due, according to Supervisor Swift, to the fact that he kept the pipes full of water from the start at the spring and has no traps of any consequence.

Ten thousand new boosters for the Catalina Recreational Area; baby trout just planted by Supervisor Calkins in the streams of that resort region, who after experiencing the dubious attractions of an August day in the Tucson vicinity, doubtless will never be induced to quit their new home for lower levels.

"Formal application has been made by County Agent Ware in behalf of the Alamogordo Boy Scouts for a term lease permit on an area adjacent to Caballero Springs for use as a summer camp for the local organization."

- Lincoln -

Ranger Woods reports that the prairie dogs in his neighborhood certainly have the laugh on him. On returning to work recently, after dinner, he found that all the post holes he had dug during the morning around his rye patch had been filled in by the dogs, even to the anchor posts at the corners.

- Lincoln -

"For a Ranger of several years standing Wingo succeeds in remaining rather "fresh", as may be seen by the following:

"Dear Property Custodian".

Reference is made to the correspondence in this case.

I am today signing for 28' of the tower, I climbed another section while on the lookout Thursday. The remaining portion will be signed for as climbed.

I am thinking of moving my section of the tower, as it is poorly located, do you wish your section left where it is? Kindly notify me at an early date."

Now, I ask you, is it any wonder the Property Custodian is becoming prematurely aged? P.C. - Lincoln -

"Because the Tonto recently made a refund of $50.00 on a timber sale, the Prescott allows that we did not have enough timber to fill the contract and a certain member of the District Office suggested that we might have gotten that tree growing on the Manzano, and avoided having to make a refund. They evidently overlooked the fact that said sale contract covered only MATURE timber. Also it appears that they have forgotten about our little patch of reproduction, which it still thriving in spite of the efforts of an industrious homesteader with a sharp ax and a hankering for a few fence stays. In this connection we arise to ask is there not a forest nearer than the Manzano that could come to our rescue with $50.00 worth of timber? Also what is the matter with the Prescott? Has it been reduced to a few frazzled edges of oak brush surrounding a group of mining claims?" J.H.S. - Tonto -

"Appropos of two bath tubs being sent ranger stations, the Crook Bulletin says: 'Two rangers on the Crook will be able to take baths soon'. We congratulate Messrs. Kirby and Taylor, but after all these years we advise them to proceed cautiously at first." - Coronado -

"Speaking of range improvements: At the close of the fiscal year there were in force on the Coronado 143 drift fence permits for a total of 312 miles; 190 pasture permits for 49,500 acres; 116 permits for water developments; and 35 for corrals. Many more miles of drift fence are formed by pastures and private inclosures. We ought to bring water development permits up to 200 this year, and as for corrals, there is much room for missionary work by the man on the ground." H. G. C. - Coronado

"Many signs were received this year with fragments of Santa Fe newspapers sticking to them. The paper will rub off easily if the signs are soaked in water for a short time. No scheme has been devised to remove the printer's ink which, in some cases, adheres to the signs." - Coronado -

R. L. Hughes reports rapid progress on the Water Canyon road in the vicinity of Springerville for which $13,000 has been allotted. Hughes is usually too busy moving dirt to make reports.

The Albuquerque G. P. A. has offered a special reward of $50 for the conviction of quail and duck "sooners". The quail crop is excellent and some hunters have been unable to keep hands off until the opening of the legal season.

Former Ranger Al Ray of the Tusayan was cleared of the charge of assult with a deadly weapon before Justice of the Peace Button, September 9. The County was represented by County Attorney Gold and the defense by Assistant to the Solicitor, H.H. Clarke of Washington. Mr. Cheney of this office and Mr. Mercer Hemperly of Flagstaff advised with Mr. Clarke. The prosecution arose from an arrest made by Ray of one Schultz, a squatter on National Forest Land. Schultz had made threats to prevent cultivation of Government land under permit and this lead up to the arrest, Schultz was turned loose at the time and retaliated by causing the arrest of Ray. The defense was based on the theory that Ray acted in good faith under what he believed was his authority to arrest without a warrant for an offence committed in his presence and that he was warranted in drawing his gun for the purpose of arrest.

"We can now reach the Fernow Cabin (Potato Patch) by auto, thanks to Ranger Cook. Assisted by Massey, Wyatt, Reinhild and a couple of temporary laborers he has cleared out some ten miles of road. It took lots of TNT, much elbow grease and some $300 that was allotted for the Fernow-Casner Cabin trail. The road would have been worth a thousand dollars about the time Lessel, Putch, et al, walked to the Secret Mtn. fire." - Coconino -

District 4 - Intermountain District

Experimental Project in Douglas Fir: The plan of establishing some large permanent sample plots in Douglas fir was apprpved as an experimental project in this District this year but on account of lack of funds it proved impossible to start this work. Since to simplify the work it was desired to perform the experiment in a pure Douglas fir type, there was some doubt as to whether a suitable place could be found for the work. However, in looking over the most likely regions in this District this summer two excellent situations were found, one on Meadow Creek on the Cache Forest and another one on the southeast corner of the Wyoming Forest. In both of these locations are found exceptionally pure stands of Douglas fir. Both are easily accessible and are likely to be cut over in a few years so that they are decidedly suitable for the purpose in view. If sufficient funds are secured to carry on the work next year they will be cut over in accordance with three different methods. One part of the area will be cut according to the selection system, which is about what we commonly use in our timber sale practice at the present time. The second will be cut over by what is known as the shelterwood system in which the first cutting is very similar to the selection system although perhaps somewhat more heavy, the idea being to open up the stand so that reproduction will come in underneath. Then after a period of perhaps 20 to 30 years, the remaining shelterwood is removed giving the new reproduction a chance to spring up rapidly in full light and form a new stand. The third system will be the scattered seed tree system by which only a few scattered seed trees are left on the area to reproduce the new stand. This experiment will be very interesting in regard to reproduction of Douglas fir since upon these areas all reproduction at the present time is alpine fir.

Large Recreational Project Launched

The Teton Forest has started a big recreational project at Phelps Lake, at the mouth of Death Canyon, which in the very near future will mean from fifty to one hundred summer homes and a $75,000.00 hotel. One block of lots has already been surveyed; six of these have been leased and they have applications for the remainder. They are now working, with the applicant, on the location of the hotel site, and expect within the next thirty days to forward the application for the hotel. One of the principal features of the project is a trail up Death Canyon, which will open up the Canyon and adjacent territory for sight seeing and recreational use.

Horses Poisoned From Eating Larkspur

On August 31, Rangers Ollerton and Olsen, while on their way to the Rangers' meeting, had occasion to ride along the top of the mountain from Canyon View Ranger Station to the head of Ephraim Canyon. At noon they stopped in the head of Black Canyon where there was little for their horses to eat except laekspur which grew in abundance. It was noticed that the horses were either exceptionally hungry or the larkspur found there was unusually palatable, and whether due to eating larkspur or some other plant the horses showed signs of poisoning before reaching the Experiment Station. Ranger Olsen's horse became so badly affected that he had to be left by the road side within two miles of the Station. The horses all recovered although the Olsen horse could not be brought to camp until the next evening.

- Manti -

Fire Expenditure Small on Targhee

It looks as if the fire season on the Targhee is over with a total expenditure for the season of $24.40. Lightning has been the cause of practically all the fires on this Forest, none of which did any damage.

- Targhee

District 4 - Intermountain District (Continued)

Mr. Korstian states that the two banner plantations of the District which were installed at the Cottonwood Nursery last spring in Engelmann spruce and blue spruce planted under aspen are still showing 100% vigorous at the close of the first growing season. These plantations have incidentally doubled their growth this year, which of course was a favorable year for the plantations.

District 5 - California District

"Our Register" says Guard Hughes, writing from the Eagles Nest Camp Ground (Eldorado) "Shows that there have been 300 machines camped here since July 22. Two hundred were in the month of August."

M. J. Langdon, Carlotta, has been arrested and has paid $25 of his $50 fine for leaving a camp fire. Balance suspended. C. E. Bartlett of Nevada was arrested and fined $25 for making a false statement to obtain a resident fishing license. Leslie Thannon of Arcata contributed $50 because of the combination of camp fire and forgetfulness, as did Harry Adams of Orland, while H. G. Brauner of Sacramento shelled out a like sum for having killed a spotted fawn.

You may not know it, but Miss Ora D. Hawkins, stenographer on the Modoc, made the trip by plane from Alturas to Red Bluff on Sept. 8, returning to Alturas on Sept. 9. While the Modoc does not claim the honor of her being the first Forest Service woman to "go up in the air", they do contend that she is the first to make a complete round trip over a regular patrol route, with four hours in the air to her credit. And incidentally Miss Hawkins has seen more of the Forest on which she is employed than any woman employee occupying a similar position. Summary of Patrol Operations at Mather Field, prepared by Ranger Wilcox, is just received for the period July, August and first half of September; 197 fires discovered. Of these 33% were exact (within less than 1/4 mile) hits; 19% were "75%" (1/4 to 1/2 mile) hits; 48% were "50%" (1/2 to 1 mile) hits. 10% of all fires were discovered and reported to the Forests first by the Air Patrol, and 42% of all fires were reported by wireless.

Consider this record, all ye who doubt, and then remember, if you can, what our own lookout service accomplished (in comparison with what it now accomplishes) 8 years ago. Remember too, that our present lookout service is the development of 10 years of careful training and equipment.

Africa like the United States has its troubles with grazing, brush and erosion. It is stated that where the uplands are not grazed heavily enough and are not burned then brush and tree growth come in and crowd out grazing. Whenever grazing occurs, the valuable grasses disappear and there is also no brush. Burning keeps out the brush and stimulates the grass but erosion sets in and the land loses its fertility, the forage plants disappear and the soil is washed away. Sounds like part of California.

At last we have it! Positive evidence that a tailor-made cigarette will start a fire. Also, at last we have found the man who searched carefully until he found this evidence. Witness Ranger Harry Hunt's notes on the Riliz Canyon fire under the heading "Clues found". - "Paper stub of tailor-made cigarette and a lot of horse tracks - xxx The cigarette stub fell to pieces when touched." We are slowly learning that it is the little things that made the successful case and not the big, obvious things that everyone notices.

On September 15 District Forester Redington appeared before a meeting of the members of the Farm Bureau of Santa Cruz County and the Chambers of Commerce of Santa Cruz and Watsonville Counties for the purpose of discussing the handling of a body of virgin redwoods. This tract of timber, comprising approximately 6,500 acres, has an estimated stand of 200 million feet and is located on Soquel Creek. The owners of the tract are not operators, but are anxious to sell and have set a tentative price on the land and timber which was reported to be $100,000.

Local interests are anxious that this tract should not be devastated by destructive lumbering, and there is a decided sentiment in favor of placing the timber under some management, preferably that of the National Government, which would protect it and supervise the cutting. The general sentiment of the community seems to be for regulated use of the area rather than for the creation of a park.

District 5 - California District (Continued)

Mr. Redington explained to the meeting the restrictions upon the acquisition of areas by the Government and pointed out that our program for our Forest policy contemplated the acquisition of suitable areas by States and municipalities. He informed the meeting that the Forest Service was committed to aid in the establishment of groves of redwood trees and Humboldt and Mendocino Counties as National Parks, but gave his assurance that the Forest Service would be glad to act in cooperation with the State University in formulating a form of management for the timber.

It is Mr. Redington's belief that the tract should be purchased by the State, County or local municipality, since it offers an almost unexcelled opportunity for demonstrating scientific Forest management in a redwood forest. The tract could very easily be worked on a sustained annual yield basis to provide a certain supply of Forest products for a comparatively small locality. It is very encouraging to know that the citizens of Santa Cruz are interested in the preservation of this tract of redwoods in some other form than as a park, and it is hoped that some plan may be worked out whereby their desires can be met.

District 6 - Northern Pacific District

Ranger Dick Sullivan, of the Washington, recently taught a lesson of forest protection. Notified by Forest Guard West that Ralph Scott had left a camp fire burning at the mouth of Downey Creek and returned to his home at Sauk, Ranger Sullivan covered the 20 miles between Darrington and Sauk, arrested Mr. Scott, took him 24 miles, - through Concrete and Hamilton to Lyman, - before he found a justice. At Lyman, Justice Brendal fined Scott $50 and costs amounting to $2 and gave him a plain talk on fire prevention. Mr. Scott evidently learned his lesson, for Ranger Sullivan says: "He was very nice and thanked me for the way we handled the case."

Dr. Haven Metcalf, of the Bureau of Plant Industry, Washington, D.C., called at the District office on his western tour of inspection, for a conference with Dr. J. S. Boyce, consulting pathologist. Dr. Metcalf said that no white pine blister rust had yet been found on the coast.

Andreas D. Helms, of the New South Wales, Australia, forestry commission, spent several days in the Portland office this month, securing data on reforestation work in the Northwest, and studying our tree species to determine their suitability for introduction into New South Wales, - where nearly all the timber is eucalyptus. Mr. Helms says that forestry in Australia is in an experimental stage, each state maintaining its separate forestry commission; that forest fires are frequent, and that trees damaged by fire are attacked by white ants, which complete their destruction. It is very probable that Douglas fir will be introduced in Australia as a result of Mr. Helms' visit.

The motion picture, "Trails that Lure", filmed on Columbia River Highway and in Eagle Creek Canyon by H. T. Cowling and G. R. Goergens, motion picture photographers of the Department of Agriculture, began its itineary in Portland, Sunday evening, September 12, at the Rose City Methodist Church. The pastor reminded the people that many of the most important events in the Bible took place among mountains, streams, and canyons. Next Sunday night "A Pack Train Trip in the Cascades" will be shown at the same church. Requests for the use of these two films are coming in from schools and churches.

The end of the airplane patrol season recalls how one of the ships did effective detective work. Its observer sighted a man burning brush illegally in an isolated spot and reported it to the supervisor, who sent a ranger to apprehend the transgressor. The latter said: "I knew as quick as I heard that aryplane coming I was a goner."

District 7 - Eastern District

Forest Inspector Dieffenbach who has recently returned from the Monongahela Forest of West Virginia calls attention to some interesting facts which pertain to that Forest.

Originally this region was largely covered with spruce and hemlock timber with some hardwoods on the lowest slopes. The spruce early invited the manufacturers of paper pulp to this locality with the result that practically all of this species has now been removed. The present demand for pulpwood has made practically all of the hardwood species merchantable. It was learned that even black gum, which formerly had no commercial value at all, is being used to a considerable extent and is bringing a good price.

Large operations are characterized by the closest utilization. It is interesting to note the reduction of the stump heights between the earlier cuttings, say twenty (20) years ago, and those of today. Present stump heights come well within the Forest Service requirements on these private operations and logs with a small end diameter of 6" were seen being taken from the woods. It is also of interest to observe the practical illustration of the awakened realization in the value of fire protection. One tract containing 61,000 acres of land that was inspected has been operated for about 25 years. Most of the lands first cut were repeatedly burned and as a consequence, this is entirely barren of all tree growth. In more recent years fire suppression has been given attention and consequently reproduction in later cuttings is prolific and thrifty. As is generally the case, the burned land that is restocking is coming in in hardwoods.

The West Virginia Pulp & Paper Company, which owns about 175,000 acres in the south central portion of the forest is reported to be vigorously protecting its lands from fire and is now taking steps to develop management plans to assure the Company of a continuous supply of timber for its mill.

One of the most interesting facts noted is that even the very steep slopes in this region do not erode and as the lands adjacent to the farms have been cleared they have been converted into grass land for grazing purposes. Sheep raising is an important industry and in time those interested in it may compete with the Forest Service for lands that are subject to purchase. At the present time it is not believed that this is a serious consideration for us since the clearing of the land is such an expensive matter that it is not believed the returns from sheep raising will justify the expense.

It will hardly be possible for the Forest Service to ever assemble in the Monongahela a boundary of land similar to the Shenandoah National Forest on account of the agricultural lands which intervene between the bodies of natural forest land. A peculiar feature of the country is that many of the mountain tops are table like in character and these are universally cultivated. It will be possible, however, to assemble administrative units containing from 50,000 to 100,000 acres each within the boundary of the forest.

Supervisor Johnson recently caught three flying squirrels which are so young that they must be fed from a medicine dropper. Their health gives him considerable concern. One recently died.

That intensive management can be made to pay is proved, in one instance at least, on the Cherokee Forest. Near McFarland station is a tract of about 1500 acres acquired by the Government a few years ago after it had been cut over at least once, and possibly twice, by previous owners. The stand left consisted of timber unmerchantable for sawtimber a few years ago on account of condition or size, and was mostly decadent chestnut with a very light sprinkling of old and defective yellow poplar and white and red oak.

With this apparently uninviting prospect before him, Ranger Fouts got busy with his marking axe and within the last two years this is what he has sold in three sales from one acre typical of the whole tract so far as stand is concerned located about one-half mile back from the railroad on a very steep mountain slope:

First sale	29.26 cords of chestnut acidwood at $3	$87.78
Second sale	3320 feet b.m. yellow poplar at $12.50 per M	41.50
Third sale	12.61 cords chestnut acidwood at $2.40	30.26
		$159.54

The cutting done in these three sales has left the acre in question in splendid condition and was fully justified by silvicultural results even had there been no income therefrom.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

October 4, 1920.

Wood-Using Industries Organized for Reforestation and Conservation of Material.

A meeting of unusual significance to forestry was held in Chicago on September 28. It was a follow-up of the Reforestation Conference of Wood-using Industries held at Madison in July, and carried out the plan then initiated of linking up the varied wood-using industries of the country behind a national reforestation policy and a concerted effort to save waste through better use of wood. The slogan of this movement might well be "to grow two trees instead of one and make one tree do the work of two".

At the Chicago meeting, a final organization was adopted which is really a "super association" of the present associations of wood-using industries. This organization, which tops the pyramid of wood users, will be composed of as many as care to join of the sixty odd associations of manufacturers of wooden commodities, or commodities which utilize products of the forest. The range of interests thus represented is enormous and exceedingly varied, extending from the wood turners, the furniture and box associations, and the implement and vehicle associations to the Tanners' Council and the American Railway Association. Mr. Parsonage, head of the John Deere Implement Company, is the president of the new organization. The secretary, Mr. W. B. Baker, is the secretary of the Affiliated Organizations of Furniture Manufacturers. There is also an executive committee and the constitution provides for committees on legislation, reforestation, conservation of material, and on publicity and membership.

It is, of course, impossible to forecast how generally this new organization will be supported by the associations eligible for membership. At the Chicago meeting a great deal of real interest was expressed in the objects of the organization; and there is every reason to believe that the new association will be a powerful factor in the fields which it has marked out for itself. As to reforestation, the only question asked was: What can be done? A deal of interesting data was also produced to show the possibilities in the conservation of material. Mr. Babbitt, Secretary of the Association of Wood Turners and a manufacturer of extended experience, showed the enormous saving that can be effected in the manufacture of standard handles by procuring dimension stock sawn to specifications which will remanufacture with the least waste; and this same dimension material usually enables the sawmill to manufacture the log with less waste than formerly. The standardization of lumber specifications, the general use of dimension stock rather than boards for furniture-making; the standardization of specifications for railroad stock, etc., are questions bearing on this subject. An ex-Forest Service man, Austin F. Hawes, now employed by the Turners' Association, probably will have an opportunity to work on this phase of the plan.

W. B. GREELEY.

A Day at the Bessey Nursery

When the Burlington train was drawing into the Halsey station on September 1, I had my first glimpse of the Bessey Nursery and the surrounding plantations, which form the most conspicuous objects on the landscape for miles around. The older plantations now show a dense stand of young pines and present a very decided contrast to the monotony of the grass-covered sandhills through which the traveler has passed for hours. A very large and appropriately worded sign also attracts attention and identifies the nursery and plantations. The road to the nursery crosses the Middle Loop River and traverses a bit of sandy road, which, like many roads in the region, is periodically "hayed" -- that is, the wild hay of the country is frequently used to make the roads in the sandhills passable.

On arriving at the nursery and viewing the excellent two-story cement-block house, my first inquiry naturally was as to the identity of the prosperous neighbor to whom the house evidently belonged. To my surprise I was informed that the nursery was housed in the very substantial structure and a number of other smaller buildings in the vicinity, the house having been constructed in the early days before the present building restrictions had been imposed.

A Day at the Bessey Nursery (Continued)

Next morning I had an opportunity to examine some of the plantations. The most striking is the jack-pine plantation set out seventeen years ago, in which many inidvidual trees have attained a height of 26 to 28 feet. These trees were planted on sandhills immediately back of the station and have formed a complete forest floor, the ground being covered with a dense mat of needles. The trees have been bearing cones for a number of years, and it would not be surprising if natural reseeding soon takes place. It is hard to realize that this dense forest-growth has been established on what were once shifting sand dunes. The results here have been likened to the plantations in the Landes in France, where a barren sand-dune country has been transformed into a prosperous forested region. The results at Halsey show the possibility of planting trees under proper technique on almost barren, non-agricultural soils, where to all appearances the conditions are very unfavorable and the soil is almost sterile.

It has not been possible to secure uniform results every year by planting. A great deal has been learned through experimentation, and it may safely be said that a technique has been developed in nursery and planting practice which can be counted on to produce consistent results in the future. One of the most serious obstacles encountered has been the constantly recurring danger from fire and rodents. Interesting methods are in vogue to protect the plantations from these dangers.

The plantations in the Nebraska Forest during the past spring were only 506 acres, because of the forced curtailment of the work due to lack of funds. The total area planted to date is 6,250 acres.

CLINTON G. SMITH.

National Forest Fire Prevention Work Crystalized

Assistant Forester Carter and Forest Inspector Peters attended, on September 28, a meeting at Albany, N. Y., called by Conservation Commissioner Pratt of New York and Secretary Reynolds of the Massachusetts Forestry Association. The meeting was devoted entirely to a discussion of fire protection and resulted in the formation of an organization known as the National Committee for Forest Fire Prevention. An Executive Committee consisting of Colonel Pratt as Chairman, Mr. Reynolds as Secretary, Colonel Graves, Mr. J. E. Rhodes, and State Forester W. T. Cox of Minnesota was appointed with authority to act for the Committee in securing members from all States and in taking any other action which might seem advisable between meetings of the General Committee. The Committee was also empowered to fill vacancies in its membership or to increase its size. Since neither Colonel Graves, Mr. Rhodes, nor Mr. Cox was present at this organization meeting, this provision seemed necessary. The active support of this new organization will undoubtedly prove of great importance in presenting to Congress the need for greatly increased appropriations for cooperative fire protection. Although the attendance at the Albany meeting was rather small, the National Committee may grow to large size and exert considerable influence, if its Executive Committee functions well.

Fire Prevention (like Charity) Begins at Home and Goes Abroad

The following letter from a school teacher in Lublin, Wis. dated October 3, furnished a good opportunity for the spread of the fire-prevention lesson, where experience is the powerful teacher:

U. S. Forestry Service,
Washington, D. C.

Dear Sirs:

We have been fighting forest fires today. Men must watch for the rest of the night to give the alarm if the fire comes closer to the new schoolhouse. It is within a few rods of the school now, but does not seem to be burning so hard as it has this afternoon. The larger fires now are north and south of here, not so close to the school. Every year much property is destroyed in Wisconsin by such fires.

I want

Posters Pictures Pamphlets

or anything you can send me without cost to me that will be useful in teaching the people of this community the value of our forests, precautions against fires, and how to fight such fires.

Thank you.

Part Two of a Fertile Subject

Brookings, Oregon, Sept. 24

Editor of the Bulletin:

Sept. 24, 1920.

Dear Sir:

I note in "Bulletin" of August 23 a letter from E. R. McKee, Forest Ranger of the Florida National Forest. His appeal for help in regards to photographic production interested me very much. As I have had twenty years experience as a professional in that work and delved deeper into the chemistry end of it than the majority, I have an advantage over many who are in his position. Would it not be possible to arrange a course whereby these enthusiastic men could be informed in a direct and educational manner of their mistakes and taught to use their cameras and material to an advantage to the Forest Service? There are numerous pamphlets published by the different manufacturers of photographic material distributed free that are of such a nature as to be very beneficial to the professional, as well as the amateur, and to one who has been one of these it would be an easy matter to procure them in quantities sufficient to meet any demand. These, together with direct correspondence, which I believe to be invaluable in such instances, would be an aid to the Forest Service in obtaining better photographic prints from a chemical standpoint and certainly from a point of technique. Or a book could be compiled to cover this field quite easily and would from a business view be a valuable addition to our libraries.

Good pictures, illustrating the work of the Service, pictures that speak louder than print, are certainly needed in this work of informing the public of its value. The editors of all our magazines know the value of pictures, both from an educational view and as a medium of advertisement, which in many instances serve the same end.

If the Forest Service realizes this, then why not take it seriously enough to start right by building a foundation that has a permanent value and one that would support a tremendous amount of advancement. Editors are clamoring for out-of-door stories from our men, but always they ask for illustrations. Why? Because they know that pictures are a valuable attendant to any article, because they assist the eye and demand attention where print would fail. We certainly can advertise in this dignified manner.

I could not refuse the appeal of Mr. McKee and should it occur to you that by correspondence these amateurs would be benefited in their productions, I would be glad to give them all the assistance at my disposal during off-duty periods. There are men around you in Washington that I could name who would be delighted to assist in any manner in this work and who have a national reputation proving their ability; and if I can be of any further assistance, command me.

CLINTON A. SMITH
Forest Ranger.

(Editor's Note: The Office of Public Relations regards its illustrative material as one of its greatest assets, and all discussion of the use and improvement of photographs in its work helps to pave the way for the best handling of increased facilities, in that sweet bye-and-bye when the wherewithal to make our dreams come true is available. Meantime, free discussion of the subject, interchange of ideas and explanation of problems, and cooperation in any and all ways are desirable.)

Some Comparisons of Districts 2 & 3

The following extracts are from a memorandum submitted by Mr. Leopold after a few weeks spent in District 2.

"Fire:

Mr. Headley last spring brought up the question of why D-3 needed so many guards as compared with other Districts. The figures are as follows:

	D-2	D-3
P. Guards allotted 1920	67	172
" " " 1921	62	126
" " asked for 1922	68	138

With respect to D-2, a partial answer is found in the smaller ranger districts in D-2. The remaining answer is indicated by the following figures:

Some Comparisons of Districts 2 & 3 (Continued)

Year	D-2	D-3
1915	437 fires	417 fires
1916	493 "	669 "
1917	458 "	816 "
1918	392 "	795 "
1919	346 "	404 "
1920 to Aug. 20	186 "	150 (?)

"The long and short of it is that except on several of the Wyoming Forests, D-2 normally has such a light and irregular fire season that it is better business, when fire danger does occur, to put the Rangers on fire duty, even at the temporary sacrifice of their regular work, than to carry a large protective force each year. The smaller ranger districts, the wide distribution of cooperating ranchers, and the fact that the danger periods are June and October (rather than June and early July as with us) add further justification to the D-2 plan for the normal year. Also, contrary to my own previous impression, that part of D-2 which I saw has no greater proportion of burnable area than the average of D-3. The burnable lodgepole type is about offset by our coarser bunch grass and our yellow pine needles.

"30.6% of the D-2 guards are fixed lookouts, as compared with 50% for D-3. I formerly supposed this to be due to the topography of D-2 not being adapted to the lookout system. The country which I saw, however, seems admirably adapted to lookouts by reason of the outlying "domes" of moderate height commanding radial views of large drainage areas. It also seems that both guards, and Rangers when on fire duty, generally ride a series of lookout points, and are in fact a combination of non-telephone lookouts and smokechasers.

"All of the foregoing differences in fire practice between D-2 and D-3 seem to be logical and corollary to the differences in normal fire hazard. (As to the existence of this difference in normal hazard, it might be interesting to state that of 6 rangers on the Cochetopa with an average period of service of 6 years, only one has fought a Class C fire and only 3 have fought fire at all).

"So much for normal hazard and normal fire years. But how are we to account for the enormous areas of old clean burns in D-2 and in the higher parts of D-3? The practical absence of normal hazard in D-2 has created a prodigious impression in my mind as to the magnitude of the difference between normal and abnormal years. In short, even our ordinary "bad" fire season in either D-2 or D-3 is as nothing compared with what we are going to be up against about once every generation. Kircher reached this same conclusion after studying old fires on the Santa Fe, fire history bears it out, and various Foresters have said it repeatedly, but personally I have never attained a real "conviction of sin" until I saw this D-2 country with "no fires, only burns".

"In preparing for the abnormal year, which of course will be the real test of our organization, D-3 enjoys a wholly fortuitous advantage in that we have enough of a normal fire season to keep our men in practice to a degree, to force us to build and to justify us in maintaining a system of fire improvements, and to carry annually a specialized nucleus of fire force. D-2, through force of circumstance lacks some of this practice, special improvements, and force. I think the big problem in both districts is to build an organization capable of efficient expansion to two times, ten times, or two hundred times its normal size. It is my distinct impression that neither district can claim to have consciously attacked this problem, in the sense of engaging the thought of the entire personnel.

Some Comparisons of Districts 2 & 3 (Continued)

"Improvements

"D-2 seems to be having more trouble with mislocated ranger headquarters than D-3. The special studies made by Calkins and Kircher have put us a little ahead on this question, but the organization studies of proper Ranger District Units started by Morrell and Keplinger will [illegible] ultimately put them ahead unless we do the same in D-3. Both kinds of studies, i.e., (1) the proper unit and (2) the proper headquarters for that unit, are necessary in both districts. I think that both districts are headed toward a policy of building stations near towns, even at the sacrifice of central location, and then building strings of little cabins and pastures to facilitate field trips.

"D-2 has built many rather elaborate toilets of the "Kentucky sanitary" type. These were built non-cleanable. It has been found that the climate is too cold for rapid bacterial action and that these toilets must be abandoned. I think this adds weight to our policy; namely, that a well constructed, frequently moved pit type is better than a doubtful septic tank type.

"Many phone lines in D-2 have the poles stencilled with serial numbers. This is valuable in determining durability of poles, and also enables permittees to report the exact location of breaks, but I doubt if it would pay out on the cost.

"Work Plans

"The new D-2 Ranger Work Plan is far ahead of anything else in its line, and should by all means be adopted in D-3. Detailed recommendations for utilizing the principle of the D-2 plan will be submitted later.

"Personnel Ratings

"The D-2 personnel rating is essentially a percentage rather than a scale system, and therefore not directly comparable with the D-3 plan. I do not as yet feel competent to say which is the better or whether either or both of them are essentially sound. I think that our proposed D-3 Classification of Personnel, which can not here be commented on at length, is the best plan for using ratings that I have so far seen.

"Forest Ratings

"Mr. Keplinger, Mr. Agee, and myself did some preliminary work on a proposed method of rating the qualitative status of administration on a Forest, i.e., the degree to which a Forest has been brought up to ideal or standard administration. This qualitative rating will be made the subject of further report. Mr. Keplinger, by the use of his "Units of Work" has also drawn a tentative method of quantitative Forest Rating, or weighing the total amount of work which promises to develop into something valuable.

"Organization Studies

"I am now convinced of the fundamental soundness of the D-2 "Unit of Work" idea. If this idea is sound, then it is the first and only method invented for direct quantitative comparison of work on units, and opens the way for the solution of the most difficult of organization problems. The D-2 conversion factors are based on D-2 1917 cost records. I think we should work out similar factors for D-3, and if possible get a better basis than the 1917 cost records.

"Before my quantitative analysis of what constitutes a Ranger District can be applied, however, it is first necessary for both D-2 and D-3 to settle on an organization policy as to how to man a district. I am pretty sure that the D-2 system of a yearlong force, each man with a separate district based on peak load, is not economical. I am also pretty sure that the D-3 system of large districts based on average load, with assistant rangers at large to take care of the peak, is not efficient. Here is a large field for experimentation and study, using some of the fundamental conceptions such as work units which D-2 has established. The training question also enters here as an important factor.

"Cooperative Purchase

"Mr. Nieper states that probably 75% of the total D-2 force avail themselves in some degree of these facilities. The handling of private orders, he says, takes not over one hour per day of his time. It is interesting to note that in his opinion, the plan would work better in a small town like Albuquerque than in a larger town like Denver.

"Central Files

"Under the able direction of Miss Wallace, the central file scheme seems to work very satisfactorily. It is undoubtedly superior from the standpoint of locating old correspondence, saving files in case of fire, and systematic destruction of obsolete material. Its success depends entirely, however, on the continued services of an especially qualified file clerk. I am not at all convinced that it is an economical system, and none of the D-2 officers, or the more experienced chief clerks, were willing to state affirmatively that they considered it better than the decentralized system."

Looking Backward

New Orleans has been for a number of years an important lumber center. The extent to which the timber resources of the surrounding country contributed to the early development of the colony is outlined by the following extract from an article in "The Geogrpahical Review" on "New Orleans in Early Days:"

> "Lumber was a valuable product of the region and rapidly became an important item among the exports of the period, a large amount being sent to the West Indies. New Orleans was the distributing port, and to it lumber was sent easily by way of the bayous which surrounded nearly every plantation and formed a part of the great system of channels connecting with the Mississippi River. As settlement spread to the banks of streams flowing into or away from the Mississippi, lumbering developed along them, especially as the more desirable kinds of timber became somewhat rare. Timber was one of the two leading products of the Plaquemine settlement. The flood waters of the Mississippi furnished the power by which the planters operated their saw-mills.
>
> "Cypress was preferred by the French to build their houses, as it was durable, light, and hence easy to carry, and so close-grained that it was not easily damaged by insects. By 1730, however, the easily accessible cypress was becoming rare. The black cedar and the red cedar, especially common along the coast, were considered the next most valuable woods, while the red, white, and live oaks, the ash and the elm, were largely used. Pitch and tar were produced abundantly, especially in the region between the Mississippi and Mobile, which was covered with pitch pine. In 1736 the output of the colony was about 7,000 barrels, but a larger market was needed. The production of pitch and tar, in connection with the large supply of excellent timber, inspired more than one with the possibility of the colony becoming as great a shipbuilder for France as New England was for England."

No doubt the old French colonists thought times were pretty hard when they could no longer go out in the back lot and cut choice cypress for their building purposes. One wonders what their thoughts would be if they could know that the once splendid Forests of Louisiana have been so depleted that their end is in sight.

The Reclamation of the Coyote

A writer in The New West Magazine proposes that instead of poisoning jack rabbits and coyotes a better plan would be to buy and trap coyotes and keep them in coyote proof enclosures and feed them jack rabbits, to be secured by the annual rabbit drives to take place in parts of the West. In this way, he argues, the coyotes would produce valuable crops of fur in increasing quantities, their depredations on cattle and sheep would be reduced, and the rabbits instead of being wasted would serve a useful purpose.

Undoubtedly game experts of the Service will find fault with this suggestion, but, perhaps, true conservationists will see its merits.

Cascara Industry Investigated by Canadian Expert

According to "Conservation" for September, there is increasing difficulty in securing sufficient cascara or barberry bark to meet the demands. The supply of cascara in the Pacific States, which until recently furnished all of the bark used, is said to be practically exhausted, and attention is now being turned to British Columbia.

Although cascara is confined to the valleys in the southern coastal portion of the province, there is said to be a considerable amount available, which if thoroughly and properly harvested could be made the basis of a permanently profitable industry. The cascara reproduces prolifically by seeds or by sprouts from the stump, if the tree is cut, but the prevailing method of stripping the bark from the standing tree results in the death of the whole tree. The berries are carried by the birds, and, if protected patches of trees were established, they would serve as distributing centers for natural reproduction. Attempts to grow the tree under cultural conditions have not met with much success.

The Commission of Conservation of Canada has engaged Professor John Davidson of the University of British Columbia to prepare a bulletin which will deal with the cascara industry and the best methods of maintaining the supply.

District 6 has in the past talked about its sale of cascara bark. Maybe so. - Professor Davidson can get some dope on the right way to perpetuate the tree from the D-6 silviculturalists.

Excuse Our Dust!

The following letter reached the Washington Office under date of September 17, from an attorney in Fresno, California:

> Gentlemen:
>
> There is an aviation field kept by the U. S. Government near the City of Fresno, California, for the purpose of maintaining a Forest Fire patrol covering the Sierra Nevada Mountains. This aviation field is in a deplorable condition, being badly cut up and very dusty. When the planes are started, enormous clouds of dust are raised, causing a great nuisance to the people living and owning property adjacent thereto.
>
> I am writing in behalf of Mr. and Mrs. Frank Belles, clients of mine who own an orchard of 60 acres in the immediate vicinity of this field. This orchard represents their life savings, and it is being greatly damaged by the great amount of dust raised. Should this con--tinue in the future, the property would be largely ruined. Therefore, I am taking up this matter with you to see if some action can not be obtained on the part of the Forestry Department to put a stop to this nuisance.

Our Letter Box

Grants Pass, Oregon,
September 30, 1920.

Editor, Weekly Bulletin,
Forest Service,
Washington, D. C.

Dear Sir:

Reference is made to Mr. Helm's tale at the foot of page 14 in the issue of September 5. In order to make the record of this yarn complete and accurate, I feel called upon to state that it was circulating briskly in the logging camps around Puget Sound in 1906. Paul Bunyan and Western Red Cedar were then the leading characters.

Very truly yours,

E. H. MacDaniels.

Washington Notes

Mr. C. L. Forsling, formerly in charge of the Coronado range reserve, has arrived in Washington to assume his new duties in grazing studies.

Assistant Forester L. F. Kneipp blew in from Ogden about October 2 and has taken charge of Lands.

The State of North Carolina has taken on Mr. William D. Clark as Assistant State Forester. Mr. Clark is a graduate of the Yale School of Forestry and will pay particular attention to the Forest fire prevention work in North Carolina. The North Carolina Geological and Economic Survey is making a special effort to secure the cooperation of land owners, lumbermen and county officials in its fire protection work, and Mr. Clark's duties will in general be those of a State Forest Fire Warden.

The Secretary has approved the appointment of Mr. T. W. Norcross as Chief Engineer of the Forest Service, effective October 10. Mr. Norcross entered the Service in 1910 by transfer from the Geological Survey and before his transfer to the Washington Office was district Engineer in Districts 2 & 3. The Bulletin offers its congratulations.

Forest Products Laboratory Notes

"Bear Takes Charge of Express Car: Lafayette, Ind.- A large cinnamon bear, donated to the Columbian Park Zoo here by E. E. Arbuckle, Greensburg, Ind., took possession of the express car on a Big Four passenger train Monday and created considerable excitement after the train reached this city. The bear was shipped in a crate, but soon after the train left Greensburg, bruin tore the wooden crate to bits with his teeth.

When George Anderson, express messenger, saw the bear coming, he ran from the car and refused to re-enter it until the bear was taken from the train here. The animal broke into a crate of chickens in the express car and killed several.

After reaching Lafayette he escaped from his captors and ran into a hotel, finally taking refuge in an ice box, open in a rear room. The bear made no attempt to attack any persons."

It seems as if a double investigation should be undertaken at the Box Lab at once:

1. To design a bear crate which a bear can not get out of.
2. To design a chicken crate which a bear can not get into.

Several bears and chickens might be obtained from the Vilas Park Zoo for purposes of actual drum tests of crate designs. Construction of a satisfactory ice-box for catching bears might also be worth some study.

Laboratory Daily Bulletin.

Woman to Recover Oak and Walnut Logs: Sunken treasure in Lake Erie is the goal of Mrs. Margaret C. Goodman of New York City, formerly of Detroit. But this treasure is neither gold or silver. It is just logs. Nevertheless these logs constitute a fortune - they are a cargo of walnut and white oak logs sunk in Lake Erie in 1859, when a three masted schooner carrying them from a Canadian port went down with all hands save one.

Mrs. Goodman is the only woman in the world, it is said, engaged in deep sea salvaging. She organized the company that raised the copper cargo of the steamer Pewabic, sunk off Thunder Bay, near Alpena, before the Civil War. One single piece of copper in mass form recovered from the Pewabic was sold for $3,500. The amount recovered ran into a big total.

Laboratory Daily Bulletin.

District 2 has Light Fire Season

The character of the fire season in District 2 is indicated by the following extracts from a letter received from the District Forester:

> "Of the twenty-six Forests in this District, six have a record of no fires this year up to September 18. If the San Juan had not been consolidated with the Durango, the record would have been seven. Three of these are in Colorado, two in Wyoming and one in Nebraska.
>
> "Six other Forests have had only one Class A fire each. Two other Forests have had only two Class A fires each. Class C fires have occurred on only nine Forests.
>
> "Such a record can not be accounted for by the passing thought - "Well, they had a favorable season and were lucky". It didn't use to *happen* that these widely scattered areas escaped fires and fire damage. It must be then that the publicity and educational work is bearing fruit, that the efforts of the guards, rangers and Supervisors in securing

practical cooperation are worth while and it surely indicates an "on their toes" attitude in both prevention and suppression. Don't take this as crowing; it's too soon to crow, even if we were so inclined. We may have plenty of fires and heavy expense to be sorry for yet this year. I want to bring out forcibly, and I think the Washington office can well emphasize and enlarge on it, the fact that full cooperation on the part of the public in fire prevention and suppression is not only an essential factor in keeping damage and cost at a minimum but that the public can already take a large share of credit for results already obtained.

"New methods are constantly looked for to keep public interest aroused. Arrangements have been completed with two commercial flying concerns to the end that their pilots are constantly on the lookout for fires, and if smoke is sighted they will stop at the first landing field to report it. These ships fly from Denver to Pueblo, Trinidad, Santa Fe, Grand Junction, Salt Lake, Estes Park, Fort Collins, Cheyenne and Casper, and necessarily touch many intermediate points. The airplane companies were keen to get into the game when the suggestion was made, largely because of the publicity it affords them. We have furnished folding state maps mounted on linen for the pilots' use. This has cost us very little time, which covers all we have put into it. The reporters were keen for this sort of material and we have gained good publicity. I am enclosing a copy of Forest Ranger Clover's report covering an experimental flight made on the San Isabel which may prove of interest.

"A new step in the fire game was accomplished this season. In some sections, the Forest Service being recognized as an efficient fire fighting organization, there is a tendency to feel that all the responsibility rests with the Federal Government, particularly in fire suppression. It sometimes takes considerable explaining to have people understand why we do not spend money on occasional fires which do not threaten National Forest lands. It has, therefore, been the practice to try to educate the public to their responsibility. The City of Pueblo has a municipal camp ground which adjoins a National Forest; at a distance of approximately three miles from the Forest boundary is a summer home site colony. Several residences are elaborately planned and have been built at great expense in a yellow pine type where there is heavy reporduction. Briefly, a conference with city officials and summer home owners resulted in their employing a guard to look after the home site and camp ground areas, salary and expenses being prorated to the parties interested.

"Near La Veta, the Spanish Peaks' Recreational Association employed a guard for fire prevention, at their expense.

"The matter is under consideration by the residents of Rye, Colorado, who are considering similar action to safe-guard a 600-acre municipal camp ground."

District 3 - Southwestern District

Col. T. S. Woolsey, Jr., formerly Chief of Silviculture in D-3, was a recent caller in the District Office. Col. Woolsey has sold his residence in Albuquerque and is moving his effects to New Haven, Conn. All Forest Officers probably know that Col. Woolsey was prominently identified with the forestry work of the A. E. F., and has only recently returned from France. He is now engaged on a new book on French Forestry.

Ranger Bowen of the Gila reports the presence last winter of an old bull elk on Big Dry Creek on the south side of the Mongollons. Sometime during the winter this elk was killed, the head alone being taken. The origin of this elk is uncertain as it is fairly near to the Braham Mountains where one bunch is located but separated from these mountains by considerable desert country. Again, the distance to the Sitgreaves herd is very great but the type of country in between would be more favorable to such an extensive drift than from the Grahams.

"HELP. A certain permittee on the Tonto holds a grazing permit for 1430 head of cattle and a certain United Cattle Loan Company holds a mortgage on the same brands of cattle for 9,320 head. All these cattle are supposed to be on the Tonto Forest and arrangements have been completed to count and tally out all these brands between now and June 1st of next year. We are wondering who is going to be the goat. Not the Forest Service we hope." - Tonto -

"Ranger Hughes apparently has the solution of the dipping vat problem on the Canjilon District where the dipping in the past has been practically concentrated at one vat causing long drives, possible infection of large areas and considerable damage to the ground cover along the driveways and about the plant. Hughes has persuaded the vat owner to build additional dipping troughs at various points on the district and thus do away with the objectionable concentration that has heretofore been necessary." - Carson -

"From La Madera thru El Vado to Dulce the Rangers as well as the members of this office have been jibed repeatedly as to the "enormous windthrow" which followed the cuttings on the New Mexico Lumber Company sale area south of El Vado. According to one tale the amount ran as high as eight out of every ten trees left standing. As a result of these rumors the Forest Service system of marking has received a black eye, especially in the three lumber camps above mentioned. We, are, therefore, grateful to Ranger R. L. Ground for his figures proving that the actual windthrow amounts to less than 3%." - Carson -

"Ranger Schoenberg kept up his good work by securing another conviction for violation of the Federal Migratory Bird Act. This time it was a thirteen year old boy who killed a band tail pigeon. He was fined $5 which was remitted, at Schoenberg's suggestion, pending good behavior." - Coronado -

Supervisor Winn was elected as a member of the Executive Committee of the Southwestern Game Protective Association at the annual meeting held on September 11 in Silver City.

Arrangements for this winter's sign shop are now under way. It is probable that the shop will again be located at Santa Fe, and we want to put out at least 4,000 signs, the same as last year. We take it for granted that all field officers have been gathering sign data during the past field season in accordance with the instructions on page 146 of the Administrative Guide. Requisitions should all be sent to this office before December 31 and those which are ready should arrive here by October 15.

A regular feature of the Alamogordo News is its column of "Lincoln Forest Notes". The value of this form of news has been mentioned before and more forests should step to the fore in their community by absorbing a more or less regular space in their local paper.

During last year 1083 transcontinental automobiles registered at Becker's garage in Springerville. Besides Fords, of which there were 3047, there were 663 Buicks, 430 Dodges, 316 Overlands, 201 Cadillacs, 191 Studebakers, 181 Chalmers, 167 Hudsons, 165 Chevrolets, 140 Maxwells, etc. In all 115 makes were represented, many of them being entirely new - and incidentally - curious sights to the Forest Dwellers. Indications are that this number will be exceeded by at least two thousand during the present season.

A news item from the Prescott Journal - Miner is headed, "Wales Does Not Believe in Signs." The "signs" referred to are a new crop that has sprung up on the rocks and trees on National Forest land along the new Prescott - Jerome Highway. The item said that Wales was on his way over to make a raid on these obnoxious signs. Good luck, Bass! Tijeras Canyon, near Albuquerque, has recently been blooming with these same exotic flowers and it is understood that Supervisor Shepard also has in a requisition for a gallon of rock-colored paint. Let the good work continue throughout all the Forests - it is up to us to save a little scenery along the highways.

District 4 - Intermountain District

Forest Ranger Jesse Kimball of the Payette Forest has resigned effective October 16. Mr. Kimball, who has been the District Ranger in charge of the Garden Valley District, has been connected with the Service for several years and his resignation will mean a material loss to the Payette Forest. It is understood that Mr. Kimball will engage in ranching in Garden Valley.

Lost Treasures Lure Hunters on Elusive Trail: The following item is taken from the Salt Lake Telegram:

"Treasure seeking in the mountains is again in full blast, according to Dana Parkinson, Supervisor of the Wasatch ~~and-Uinta~~ Forest, who is following a long timber cruise on the headwaters of the Provo River and Black's Fork, in the Wasatch and Uinta Forests.

"Mr. Parkinson related the story of the famous holdup on the Union Pacific about ten years ago when the bandits got away with many thousands of dollars supposed to have been buried in the hills far up on the east fork of Smith's Fork, about sixty miles southeast of Evanston.

"Following the holdup suspects were arrested, among whom was a negro. He was later visited by another colored man and subsequently the man in jail died before coming to trial. The other negro went into the mountains and built a cabin, which has since become a landmark, known as Coon's Cabin.

"This individual acted mysteriously! He would go up the creek two miles above his cabin and dig industriously around huge boulders, presumably in search of hidden treasure. He would never dig when anyone was around, but in the course of several years he potholed the country for miles around. Three years ago he mysteriously disappeared and although many think he took the treasure with him, the search has not abated.

District 4 - Intermountain District (Continued)

"Sheepherders, Mr. Parkinson said, purposely head their sheep into that section that they may have a chance to search. Every promising looking rock in the country has been undermined until East Fork looks like a sector of the Western front, pock-marked with shell holes for miles.

"Coming back over the Provo headwaters, Mr. Parkinson encountered two parties of prospectors, who were admittedly out in search of the Lost Josephine mine, one of the famous lost mines of the Wasatch. This is a mine from which an early prospector is supposed to have taken large gold nuggets, but after coming out to show them he was never able to find his way back."

District 5 - California District

Law Enforcement on the Trinity: On September 11, Deputy Sheriff F. W. Barkhaus of Newcastle was arrested near the Jensen ranch, Junction City, by C. O. Fisher for having deer meat in his possession without the accompanying horns. It was claimed by the defendant that he had tied the horns to the front of his car and that they had been lost somewhere on the road. The arresting officer stated that all he could find were two dressed deer hams which appeared as if their possessor had never worn horns. A fine of $50 was paid, and a note by the arresting officer states "Ithink Justice Barber was much too lenient in his penalty". We presume that when Fisher gets down around Newcastle, he had better comply with the speed laws with his Chevrolet.

L. L. Chappelle, of Ruth, was arrested September 16th on Mad River, for having in his possession deer meat which had been secured by killing does and fawns. He was arrested by Nathan McKnight assisted by Mr. Hays and pleaded not guilty before Justice Russell. He was placed under $2000 bond to appear for trial September 27. This case is one in which it is hoped that a conviction will be secured, as it appears that the defendant has been guilty in other cases in which evidence could not be secured. Local officers state that Chappelle is said to have remarked that he had bought only one hunting license in the past, that he would never purchase another. Further remarks were to the effect that "no game warden would ever 'get' him."

On September 18 and 19 Messrs. Redington, Barrett, Benedict, Sanford and McLeod of the Forest Service and Mr. D. C. Birch and Mr. Lewis of the Madera Sugar Pine Company spent two days in the field examining and working out in a preliminary way methods of valuation of cut-over lands offered by the Company in exchange for stumpage.

David McBee was bound over to the Federal Grand Jury under bond for $1000 at Sacramento, California, because of the setting of six fires on the Plumas National Forest. Ranger Kloppenburg saw McBee setting the fires and arrested him. A complaint was filed before the Justice of the Peace at Quincy, and McBee refused to plead guilty, demanding a jury trial. The case was then dismissed and the defendant taken before the Federal Commissioner at Marysville for prosecution in the Federal Court.

News from Col. duBois: "Well", perhaps you say, "what's the Consular Service got to offer?" Frankly, I don't know yet. I haven't been in it quite a year and while I feel ten years removed from the United States I don't feel as though I'd experienced all it has to offer by quite a sight. One thing, though, is sure. I like it! You can tell ------- that when he said I'd be around to the Forest Service within a year with my hat in my hand hunting a job, he was mistaken. I'll be back in about three or four years and then it will be into the San Francisco harbor on a transport or a Shipping Board boat on leave and it will be a saddle horse I'll be hunting and a guy by the name of Rachford to take to the brush with.

"The variety of work is so bewildering it's hard to put a name to it. If forced to it I'd say our job is to create a little corner of the United States wherever our post is, where any American drifting in will run onto American speech, American heartiness, American straightness, American methods, and an American helping hand. We have elaborate report systems, but half our accomplishment is that intangible, unreportable service that makes Americans abroad feel that they're at home when they hit the Consulate. I had a fine old girl from up State in New York die on me in a convent full of French Nuns the other day. I handled the case from the first report of sickness to the funeral and wrote her will and have her money. As in the Forest Service your reward was in the feeling that you were doing something for communities; here it's in the feeling that you're doing something for Americans. From the nervous, lonesome, "in a strange land" feeling my old girl finally cashed in as peaceful as a lamb with the idea that egerything was in the hands of her big brother, the American Consul, and she didn't have to worry.

District 5 - California District (Continued)

"I met a fine clean-cut, well set-up American guy on the street tonight He was all lathered up about the Italian police authority visa you have to get before leaving Italy. He wanted to go over to Capri tomorrow morning early and come back the day his ship sailed, but he couldn't on account of this visa thing he didn't understand. I gave him my card and took his passport and said, "Run along to Capri and play. Everything will be fixed for you when you come back". It's little things like that that make it worth while, and there's the big constructive end of trade extension where the limit is the sky and your ability. I like that end and am concentrating on it. God knows the field is virgin here for our worthy predecessor filed all his commercial correspondence in the bath tub unanswered. I've started a commercial card index and met most of the big business men of the town (but I have to talk French to 'em) and have done quite a bit of chasing about trying to place American goods. You ought to see the frost redwood stave pipe got, when I tried to interest local engineers in it. They don't savvy anything but Chestnut and Austrian fir and the idea of water conduits made out of wood seemed like a joke to them. How was I to make them believe it wouldn't rot? I finally gave it up as a bad job. I've had better luck with typewriters and shoes. And then the setting of your work! In a quaint old world city with the Bay of Naples for a front yard and Sorrento, Capri, Ischia and Pompeii around each corner, and new sights, new customs, and new sensations every day, and the thought that to-morrow may bring a code wire transferring you. Yes, ------- was sure mistaken.

Yours,
COERT".

The Alturas Plaindealer (California) is displaying in approximately every other issue during the fire season the following:

"Only a man in forest green, only a match that was dropped unseen. Only the flame - some leaves and wood - and only a waste where the forest stood."

Africa like the United States has its troubles with grazing, brush, and erosion. It is stated that there the uplands are not grazed heavily enough and are not burned; then brush and tree growth come in and crowd out grazing. Whenever grazing occurs, the valuable grasses disappear and there is also no brush. Burning keeps out the brush and stimulates the grass, but erosion sets in and the land loses its fertility, the forage plants disappear and the soil is washed away. Sounds like part of California.

-California News Letter -

District 6 - North Pacific District

The Chugach will supply the Alaska engineering commission with 170,000 linear feet of piling, 120,000 ties, two and a half million board feet of saw timber, and any other timber needed in railroad construction. The timber will be furnished under a free permit, from a strip five miles wide on each side of the right-of-way from Mile 6 to Mile 100, on a strip one mile wide along the south shore of Turnagain Arm from Sunrise to the head of the Arm, and also on a strip one mile wide around Kenai and Trail Lakes outside the 5-mile limit. The permit runs for one year.

The fines in Oregon and Washington for fire trespass during the fiscal year 1920 amounted to $13,000, according to Forest Examiner T. M. Talbott, in charge of this activity. The most recent trespasser apprehended was a sheep herder on the Chelan Forest who was fined $10 for starting a fire to clear out logs that his sheep might get to water more quickly.

Following is the text of a display ad in the "Bend Bulletin", Bend, Oregon, of September 22. "BEAR IN MIND, FISHERMEN-CAMPERS! Every tree destroyed by forest fire reduces Central Oregon's wealth just that much. Preserve the trees by being careful about fire. Protect them by spreading the gospel to all others. THE BROOKS-SCANLON LUMBER CO.

More than 44 per cent of the fires on the Columbia Forest this season were caused by lightning, camp fires and logging activities causing the next highest percentage of the burns. On the Oregon also lightning fires were more numerous than those due to any other cause.

District 6 - North Pacific District (Continued)

Forage has been plentiful this season on eastern Oregon ranges and hay is selling at from $8 to $12 per ton, as compared with from $20 to $30 in 1919, according to Messrs. Chapline and Peterson on their return from the Whitman Forest recently. On one range unit of the Whitman the capacity has been increased from 1,100 to 1,700 cattle, by the use of more efficient methods of range management which included the development of new watering places and better salting methods.

Announcement in the Department Weekly News Letter that a folder describing Lake Chelan and its surroundings, in the state of Washington, could be had by addressing the District Forester, Portland, Oregon, brought requests for the folder from all the states of the Union except Delaware, Maine, and Nevada; and from Manitoba. Requests are still coming in, though the edition is exhausted.

William L. Hall, formerly of the Forest Service and now a land exchange specialist located in Chicago, Ill., has been visiting the District Forester's office. He is quoted by the local press as saying that sentiment is crystalizing in favor of a land-exchange bill permitting exchange of privately owned non-agricultural logged-off lands on National Forests for their value in timber. At present the Oregon, Ochoco, old Paulina, and Whitman are the only Forests of this District in which land exchanges are permitted. In Oregon, through a land-exchange act, Bull Run watershed, source of the Portland water supply, is being consolidated into Government ownership for the better protection of the water supply.

The first accident at the Medford Air Patrol base occurred September 21, when one of the patrol De Havilands, with Cadet Degorma and Mechanic Luddy aboard, crashed into trees and nose-dived, completely overturning on the landing field. Neither of the occupants was seriously hurt.

A meeting was held in the Portland Chamber of Commerce September 17 looking toward acquisition by the city under special use permit of those Forest areas contiguous to Portland most suitable for municipal playgrounds and health resorts, or other welfare enterprises. A 20-acre tract near Bonneville was suggested as suitable for development as a vacation ground. Messrs. Sherrard and C. J. Buck, who represented the Forest Service at the meeting, were asked to submit a definite statement as to suitable sites available for municipal development and an estimate of what the city might do with the funds at disposal. The plans discussed for greater use of the National Forests by the municipality included also more parking space along Columbia River Highway, greater trail development, and protection and improvement of Multnomah and Wahkeena Falls. The importance to the city of acquiring suitable leases in the Mount Hood region while these are available was pointed out.

District 7 - Eastern District

The Arkansas Forest has just negotiated the first important sale of this fiscal year by selling the timber on the Wild Cat Unit. This unit contains practically a virgin stand of shortleaf pine and it is estimated that about 5,000,000 feet will be cut. Under this contract the timber will be removed within the next two yeats and the contract price is $6 per thousand. The assurance of an annual income of $15,000 for the next two years is quite a nice nest egg for the Arkansas to begin with.

F. W. Allgood, a vocational student, who has been under the tutelage of Rangers Coffey and Young on the Pisgah Forest for the past six months, has been sent by the Federal Vocational Board to take the Ranger's course at Lincoln Memorial University.

Progress on the Bennett Gap Road is being made more rapidly now than at any time since the contract was let. There are now nine subcontractors on the job. The Highway Engineer in charge, Mr. Goehl has succeeded in making it average about 16 feet, by an advantageous placing of the waste dirt.

If the plans of the State Forester and the Forest Service are carried out, there will soon be an experimental burning of spruce slash in the State Park on Mt. Mitchell. The idea is to burn this slash while the ground cover is green. It is believed that, if a fire were to start in this slash during the dry season, it could be extinguished only with the greatest difficulty. It is a safety measure - not a silvicultural one.

Forest Assistants Mattoon and Hodgkins are making appraisals of about 3,000 acres of land in the Boone Area. This acreage is owned by a number of settlers who live within or near the Forest.

Encouraged by the recent advance in the price of mica, the small "pick and shovel" operators are digging away in search of more of this mineral. Pisgah Forest has about a dozen of these mining permits to look after. The royalty charged is the maximum allowed by the Regulations - 8 per cent. - The usual royalty obtained by the private land owner is 12½ per cent.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

Team Work

October 11, 1920.

In an organization like ours, team work is an absolute essential. We may be individually willing to exert ourselves to the utmost in our work but that is not enough. We must apply our energy at the proper time and in the proper way. Many of us have not yet learned to act at the proper time. When information is called for at a definite reasonable date, is it not all too common to find, on the date fixed, that it has not been furnished? Excuses for delay are often as prevalent as reports of accomplishment. This sort of thing leads to unnecessary nervous wear and tear, unnecessary correspondence, unnecessary apologies and changes of plans, and sometimes, perhaps, to unnecessary (or shall we say necessary?) cuss words, if not to more serious consequences. Reminder calendars and promise card boxes are good tonics for this condition but they will not cure. A change of mental attitude is necessary. Can this be secured in any way other than by the exercise of a little more discipline? I doubt it! Is it our fine spirit of comradeship and good fellowship that prevents the exercise of necessary discipline? If so, which is the most potent factor in maintaining team work - good fellowship or discipline? It is important that the balance should be properly adjusted between them.

In the application of our effort I believe that we are too individualistic. The hatching of "bright ideas" is a praiseworthy undertaking, but putting these same ideas into effect without any attempt to correlate them with established procedure is quite sure to lead to disorganization and disaster. Criticism of and suggestions regarding existing practises always has been encouraged and welcomed in our organization. This is one of our strong points. The danger of developing, by this practise, a large number of individual codes of action has not apparently been clearly recognized. It is natural to fret under the restraint of certain regulations and laws when they are apparently hindering accomplishment for the time. Changes for the better, however, can best be secured by constructive suggestion rather than by disregard. The old boat will travel faster if we "stroke" together.

F. D. WOODBURY
Assistant District Forester.

Can You Beat This?

Prairie City, Oregon.

Resolution adopted by the Prairie City Stock Association.

Resolved:- WE the Prairie City Stock Association, hereby pledge our hearty cooperation with the Forest Service, in protecting from fire the timber and forage crop on the Malheur and Whitman National Forests.

1st. All members of this Association are hereby instructed to report to some member of the Forest Service, all smokes or other signs of fire discovered by them, within the bounds of the Malheur or Whitman Forests or on lands adjacent thereto, at the earliest possible time after discovery, no matter what inconvenience it may cause the individual member, so long as there is no danger of bodily harm to the member in the performance of this duty.

2nd. The Ranger in charge of the Crand Prairie Ranger District is hereby authorized to use the employees of any member or members of this Association, or hire such additional help as he deems necessary to suppress any fire that may occur on either the Crane Prairie, Flag Prairie or the Logan Valley cattle and horse ranges, if in his judgement the fire can be extinguished with less expense and with less damage to the timber and forage crop, by so doing.

3rd. The President of this association is hereby authorized to instruct the Forest Supervisor of the Malheur Forest, to suppress all fires upon the Crane Prairie, Flag Prairie or the Logan Valley cattle and horse ranges during a given period, if it is possible to do so without the aid of our members at a busy time.

4th. Any expense incurred under the second and third clauses of this resolution shall be reported by the Ranger in charge to the Supervisor and he in turn shall report the bill to the Secretary of this Association. All bills thus reported shall be paid by the users of the range on which the expense was incurred.

5th. Any member of this association or any person holding a grazing permit on either the Crane Prairie, Flag Prairie or the Logan Valley cattle and horse ranges violating any section of the above resolution shall be deemed a trespasser and the Forest Supervisor is hereby asked to proceed accordingly.

The Secretary is hereby instructed to send a copy of this resolution to the Forest Supervisor of the Malheur Forest, and a copy to the ranger in charge of the grazing districts herein specified.

THE PRAIRIE CITY STOCK ASSOCIATION
S/ F. B. French, President.
ATTEST S/ Walker Deardorff, Secretary.

And here is an instance (with a different association) to show how it works. A fire on the range occupied by the Eagle Valley Cattle and Horse Association of the Minam Forest was reported to Supervisor Evans. The Ranger of the District and the only fire guard were engaged at work away from telephone communication. To get someone on the fire quickly in absence of the two officers was the job at hand. Did Mr. Evans call up someone in the nearest town to hire new for the job - No sir - he called the Secretary of the Eagle Valley Cattle and Horse Association telling him that a fire was burning upon the range allotment of the Association and in absence of the Ranger it was up to the Association to handle the fire. The Secretary did so and paid the bills. He did it as a matter of course - A fair example of what can be done in way of fire control on range allotment if the responsibility is placed squarely and clearly upon the grazing permittees. - EVAN W. KELLY-

The Personal Equation in Brush Disposal

Men love to leave the consideration of important questions to bicker about details of execution. This is sometimes a clever means of avoiding embarrassing situations. At another time it offers a means of avoiding dissension in conventions. Again it is a smoke screen to hide the importance of the real issue. Take the matter of a National Forestry Policy. It would seem that far too much has been said about the details of its execution and particularly about slash disposal.

This slash disposal matter has been held up as a regular "boggie man". It has been made to appear that a policy of forest conservation and reforestation must stand or fall by the adoption or rejection of this detail. Absurd statements have been made concerning the cost of brush disposal and equally absurd statements have been made as to its necessity. No one who has had to fight forest fires in a logged-over region has any weak-kneed ideas about the need of slash disposal. However, that isn't what I started to talk about. I am going to take for granted the need of brush disposal and say a little about costs, and particularly something about an element of brush disposal costs which seems to have escaped general comment.

The White Mountain National Forest has some mighty bad slash areas and the region has suffered heavily from forest fires. The sale contracts now in force on the Forest all have a bursh disposal clause. The writer has been a close observer of the attempts to enforce these clauses and of the attempts at evasion. Needless to say the clauses have been enforced, but right here is where the thing I want to talk about comes in. Call it the personal equation, the personal factor, the human element or what you will, it is nevertheless the starting point from which brush disposal and its cost should be examined.

Probably illustrations will best present the point. Last winter an attempt was made to ascertain the actual cost of brush disposal under operating conditions on the National Forest. Observers were sent to operations under Forest Service supervision and notes taken over an extended period. One observer was sent to a sale which had been under way for four years under the same management. One would suppose that any lumberman would have become convinced by that time that the brush disposal clauses in his contract had teeth. Also one would suppose that he would have worked out an efficient method of burning softwood slash and of lopping hardwood tops, especially when he had had the advice and example of the entire forest force for the three previous years.

This contractor hadn't done so and probably never will. He tried for two years to evade the brush disposal clauses and then yielding, in fact he never did grant, in spirit, its necessity or desirability. Every time a Forest officer spent a night at his camp he thrashed the whole matter over again and would end up by declaring brush disposal an expensive and useless nuisance. All this in the presence of the men who had the actual work to do. Also the men were paid by the day.

The observer found that the crews from this camp made the poorest showing of any on the job. The man who did the burning was nearly 70 years old, the idea being that any one could burn brush and the less money he would work for the better. This man was continually getting behind the choppers and piles of spruce slash were frequently snowed under. It is pertinent to say here that the observer is of the opinion that one good live man can burn the brush for two crews of two men each when the operation is in mixed hardwoods and spruce stand as this was.

The methods of observation separated the time, in man hours, spent in burning softwood slash, lopping hardwood tops and fitting the timber. Thus the observer was able, at the end of the day, to say exactly what the cost of brush disposal per thousand of timber cut had been for the crew observed that day.

Other crews were working on the same area and under the same conditions, except that some were paid by the thousand feet of timber cut. All of the crews were supposed to load the teams hauling their logs. Two French Canadians formed a certain crew. They were average men and cutting by the thousand. They had accepted the idea that all slash must be taken care of and had worked out methods which were efficient and the results acceptable. Besides fitting the timber and burning the brush, these men loaded a four-horse team twice a day; the loads averaging better than 1,000 bd. ft. each; yet these men were always ahead of the team. The observed costs for this crew ran as low as 50¢ per M for burning softwood slash and 70¢ per M for lopping hardwood tops. Also they were able to fit timber, including the cost of brush disposal, for $3.50 per M for which they were paid $7.00 per M. Other crews from the same camp made good records and their average costs for the period covered by the observations were but little higher than this best crew.

The crews from the camp first mentioned had costs of over $2.00 per M for both lopping and burning and the highest costs recorded were higher still. I want to emphasize that this difference in costs was not due to any great difference in skill between the crews concerned, or of quality or kind of timber, or of conditions under which the crews worked. The difference lay in the attitude of the crews toward their work, particularly brush disposal. As regards one particular crew it was observed on several days that they spent more man minutes in loading their team than in brush disposal and it was further observed on more than one day that this crew did not cut timber enough to pay their wages. The contractor who hired these men considered them his best crew and laid all the extra cost (just what the costs were he took no pains to find out) to brush disposal, and nothing the observer felt free to say could convince him otherwise. Right there it may be well to point out that an attitude like the above, on the part of the contractor, will always re-act on the crew to the detriment of the work, aside from brush disposal, since it undermines discipline and gives the crew an alibi if they are inclined to shirk.

The observer was on this job an extended time. He has been intimately acquainted with the operation from its inception. With the data on paper and worked out and averages taken, there was, or can be, no doubt as to which crew was the most efficient. The thing to be determined then, allowing that each crew had an equal opportunity, as is a fact, is; why one crew or set of crews was more efficient than others? It is believed that the reason follows. In the camp of the least efficient crews the men were paid by the day and heard the Forest Service dammed every night. In the other camp the men mostly worked by the thousand and said practically nothing about brush disposal, agreeing that it was probably a good thing but something that must be done anyway. The crews from the first camp were all among the high cost crews. The crews from the second camp were all among the low cost crews. The difference between the average high cost and the average low cost was considerable. It may be argued that since these different sets of crews were paid in a different manner that the difference in costs could be traced to this fact instead of to their different attitude toward brush disposal. This is a valid argument and doubtless had an important influence on the result. However, it is desired to point out that since paying by the thousand was bound to promote efficiency the crew soon proved to its satisfaction that brush could be taken care of at a reasonable figure, thus removing the argument that brush disposal is an imposition on the logger. The mind thus cleared or neutralized was open to the reasonableness of the procedure and the total psychological reaction was to make the men take pride in doing the work in a manner that would pass inspection. Moreover, there is a mass of data showing that men paid by the day have done satisfactory work when convinced of its necessity, and this at a reasonable price. Also there are records to show that men paid by the thousand have not worked either efficiently, or satisfactorily according to Forest Service standards, when they believed that brush disposal was unwarranted.

One can draw his own conclusions but if one had followed this sale and these men for four years he would conclude, just as the observer did, that it makes all the difference between efficiency and moderate costs, and inefficiency and high costs whether the men doing the work of brush disposal have their heart in the work or not.

Let those who oppose brush disposal from the standpoint of high costs give this matter of the personal equation a serious thought. Let those who have tried brush disposal, or claimed to have, ask themselves whether they first dammed the idea all in a heap before the men who had the actual work to do and whether, aside from going at the matter with an open mind, they gave their men any incentive to do the work cheaply or an efficient system to work under. To the men who have met these problems first hand and have secured efficient methods and low costs, much of the printed matter on the subject appears hypocritical. To lumbermen big and little these man say "get next" and when you hunt costs hunt them open minded and efficiently. This thing can be done because it has been done.

K. E. KIMBALL

Standard Building Plans Again

Returning from my recent field trip my mind was filled with thoughts of the heterogeneous assortment of Forest Service buildings that I had seen during this trip. I was firmly resolved to urge again and desperately for standardized buildings. Lo and behold, I find that Bonner has beaten me to it, but better yet, Headley is most receptive towards the idea. This is certainly good news. Let's get this matter clinched now; we have already delayed far too long.

But I want to advance another idea, namely, ready-made or fabricated buildings. In other words, have the lumber cut at the mill in the amount and to the dimensions shown on the standardized design. Wait a bit before you get out your hammers and think of the possible savings in labor and materials. I don't claim that the scheme is practical in all cases and possibly it may not be adapted in any case. However, several people have already indicated their approval of the idea. Whether practical or not, it seems that the idea is worth very careful consideration before being discarded.

T. W. NORCROSS

More About Study Courses

Ranger Shoemaker, of the Sopris National Forest writes:

"What I consider our greatest need in this study training, is a course that will teach us to say correctly, "I hain't had no education." I am sure the Ranger force would grab it like a lemon lozenge. Give us something in spelling, punctuation, sentence construction, derivation of words, letter writing, etc., so that we can get out reports and correspondence in such shape that our Supervisor's hair will turn curly instead of gray. This is probably what is considered in the Elementary English course; and, if so, I will suggest that you make it a long "El" and put an "H" inffront if all the Rangers don't take it.

"To a man of my age and education this manner of increasing his mental capacity is a great opportunity and only hope, and when it is considered that it can be secured without cost and no time lost in providing for the family it can well be considered a blessing.

"I have been busy every winter since 1916 on one of these study courses. I took part of Surveying, but on account of a transfer did not finish. I found this rather difficult on account of the lack of knowledge in mathematics, but have taken that course since and expect to take Surveying again. No one should be allowed to take the course without a knowledge of higher mathematics, our course or a previous study. The Mathematics in the manner in which it was put out is too difficult for the time given. It should be carried two seasons like our Manual exams were to get any real good, for as it is one has to rush through so fast that it is impossible to get the principles fixed in one's mind so they are retained.

"I did not take the Telephony but went over the questions and answers of another Ranger and considered it good but more difficult to master than any by the correspondence method. However, I did take the course of special instructions put out by our Telephone Engineer and believe the rating made was partly due to information gained from the perusal of the correspondence course. This appeals to me as being the ideal manner for training in matters of this kind, as the Ranger who 'stays' is usually practical and gets the dope from the actual work more easily and thoroughly than from paper. I consider the Manual study the most worth while of all and every member of the Service should take it. I am sure my efficiency in the work has doubled since I 'dug out' those answers and thereby learned numerous things I had not heard of in the five previous years I have followed the lure of the trail.

"I think that a lot of good is lost in these study courses by not following each with a week of personal review and examination by the instructor, for a little of the human element mixed in with this study accomplishes wonders. I will never forget how Mr. Kylie would say, 'If you are sure you understand this matter just write it out for me', and we made a greater effort to be sure than if he had been over there in the District Office. If it could be arranged so that all students of a course could meet at a central point, or points, for a week after the correspondence was finished and have the instructor review and clear up many minor points they hesitate to write about, more satisfactory results would be obtained. This is only a suggestion and would naturally depend on travel allotments.

"As study is but concentrated thought along a certain line, I believe we should go the Commercial Correspondence School, which uses as its advertising slogan, "Think beyond your job", one better by adopting as ours, 'Study beyond your profession'. (Note - I suppose some one will take exception to the word 'profession' here, for those in the Service usually consider it a 'job'. or 'position' and those outside consider it a 'pension', but I, even in my humble 'position' as a Ranger, like to think of it as a profession)".

Ranger Kleiber, of the Bighorn National Forest, expresses his views, in part, as follows:

"Other organizations have had to resort to similar methods of education to reenforce their personnel; and I feel very strongly that, unless the Forest Service does not adopt some system of educating its men, not only in the technical branches of its work but in its administrative problems as well, we are running a very real danger of being swamped in our progress. Of course education alone will not save us where the lack of appropriations shows an ever-widening gap of deficiency. Without some well defined educational activities, however, the more seasoned hands of the rank-and-file can hardly be expected to maintain the high standards of work demanded of them or be prepared to enter better positions, and certainly the new blood entering the organization can not be of any material value for some time. There are exceptional cases, of course, but most of them take months or years to grasp the situation. The old hands were taught mostly by experience and its train of costly mistakes, but this is no reason why the new men coming in and the older hands passing on to other places should be taught in the same way. The experience of the Forest Service for the last fifteen years should certainly have crystallized in methods by this time wherewith to pave the way for men with ability, energy, and integrity and an intent to stay with the work.

"The correspondence courses and the educational details will go a long way in training men and placing responsibility where it can best be handled. They should also help to classify the individual for the work in which he fits best and to which his personal qualities respond most readily. I also believe that work of a very high character may be expected from the men who were forced by circumstances to take their education along with their experience, as against the men who were able to obtain their education first and gain their experience afterward.

"The telephone course presented no points of interest for me; and I derived little or no benefits from it, for two reasons. In the first place, I had no chance at my winter headquarters for practical experiments which were necessary to work out some of the lessons; and secondly, I have an inherent disinclination for experimenting with contrivances of this work. I have in the neighborhood of 50 miles of telephone lines and 4 instruments on the District, and so far have managed to keep them going very well with the aid of the telephone manual which appears ample and sufficient in its instructions. I think that if the Forest Service could hire a telephone man now and then to inspect the instruments they could be kept at a maximun efficiency. An ancient proverb says that a shoemaker should stay with his last. In this case I am very willing to stay with mine, and this will not impair my most profound interest and respect for the experiments and work of the telephone engineers in or outside of the Service. I understand that a lecture course is given on this subject now, of which the boys that have taken in speak very highly.

"There are undoubtedly many men who would welcome a course in grazing in its relation to forestry. While we have a good many bulletins published on this subject, their reading does not leave the impressions that a study course will. Many rangers are facing more or less straight protection and grazing propositions on their districts, and I know from my own experience that a study of botany and the doing of considerable grazing reconnaissance gave me a much keener conception in judging grazing problems that have come under my jurisdiction. The principal factor in this study, though, is intensive field work, as far as I can see it.

"There is one more problem that it might be well to mention in connection with educational activities, and that is that the acquirement of additional knowledge -- in that it gives individuals a broader outlook -- is also the cause of more or less restlessness unless this is tempered by moderation and loyalty to the organization; so that we may find a sting to the old proverb that ignorance is bliss."

Miss Kiene gives a Clerical Viewpoint on Study Courses

"My experience with the educational courses given by District 2 is confined to the mathematics, manual, and forestry courses. The first two have been of considerable benefit to me in my work. From the forestry course I gained only a somewhat clearer understinding of the general principles of forestry which an employee is bound to pick up if at all interested in his work. However, my mind proved to be no good at all in grasping anything more than these general principles. It would seem to me that those whose work takes them into the woods and who could, therefore, study these principles on the ground, would have much better opportunity to derive benefit from the forestry course than those who do office work only.

"The mathematics course has been invaluable to me. It seems so easy for one to lose confidence in one's ability to add quickly and accurately if out of practice. I took the course just before a large job of figuring fell to my lot and the result was I found it a pleasure instead of drudgery.

Miss Kiene gives a Clerical Viewpoint on Study Courses (Continued)

"The manual course is, I believe, especially valuable to those who have been in the Service a year or longer, particularly those whose work does not cover all lines of Forest Service work and who do not have occasion to consult some sections of the manual very often. I suppose all of us who took the course found some surprises in the way of instructions we had never known about or else completely forgotten. Taking the course whetted my enthusiasm for the Service, as one is likely to forget the breadth of Service work if officially concerned with only one branch.

"Both the forestry and manual courses gave me more of an insight into the field men's work, and this I consider of especial value to a clerk."

EDITH G. KIENE.

A Difference of Opinion

Evidently Mr. Bennett's article in the August 16 issue of the Bulletin did not express the views of all of the District 2 field men in regard to the telephone course - Witness the following:

"I disagree with Mr. Bennett's remarks about the telephone course. I had the pleasure of taking the telephone course when it consisted entirely of written work, and learned enough from it to enable me to thoroughly understand the principles of the telephone and to make some good improvements on the telephone lines on the Forest that I was then on. Since coming to the Montezuma Forest I have been fortunate enough to have three of my rangers attend the latest form of telephone course as given in District 2. All three of these men were very enthusiastic about the work and since taking the course have made some much needed repairs to our telephone lines, the value of which more than offsets the money expense of their taking the course.

"It is my opinion that the telephone course is the best study course offered and next to the manual course, produces the best results."

Supervisor Hoffman (Montezuma) in
D-2 Bulletin.

Another One For Ward Bennett's Corner

"I cannot agree with Mr. Bennett that the 'telephone course has turned out a bunch of half baked telephone engineers'. It is reasonable to suppose that the District Office never expected to turn out experts the like of Edison, Bell or Marconi, in the length of time it takes to complete this course, but, it is also reasonable to suppose that a person after having completed this course would have acquired at least sufficient knowledge along that certain line to make them more efficient than if they hadn't taken the course.

"Personally, I know that the telephone course, that I took in Durango, last spring, under the direction of Mr. Kylie, has repaid me many times over for all the effort and study that I put into it in the class room.

"For instance, during the year 1919 the lightning struck the Service line twice and in both instances put the instrument out of commission. This necessitated me packing the instrument to Durango, a distance of 20 miles, to get it reparied at the local telephone office and in both instances it didn't take the wire chief over 15 minutes to make the repairs. Had I at that time known anything about the internal regions of the instrument I could have made these simple repairs and saved 80 miles of travel.

"During the year 1923 the lightning has struck the same line once and it caused the line to go out and it took just four inches of wire and about 15 minutes of time to make the repairs.

"This difference in time and travel is the result of the telephone course."

Ranger F. E. Price, Durango, in
D-2 Bulletin.

More About the "Hird Law".

The following, addressed to "U. s. ranger, Bend, Ore.," comes from the Deschutes Forest, with the endorsement, "We are inclined to agree with this gentleman absolutely and irrevocably."

"Can you give us som atvantage of your experence in regards of Pasing a hird law in this county Deschutes co oregon it should bee com all over the state; at Present time it is only Presinve and it works hardship on the Pupel living presing of hird law while thos out side turn ther stalk loos and if they air driven of then is a man war & if we had a hird law all over the state then we would have eaquel rights and eaquel chances & Beter stak and Beter beeaf & cheaper meat: tame catel is easy fatened & a fat anamel gains in waight at a large Profit to the Perduser as well as the consumer: while wild catel will freet and wery while they air in close quarters: so that the fead is almost entirely a los: & they have to be slaterd at a heavy los no flesh only what cumelated while at wild out side range the consumer buyes bones grisles & sum inrds & a bit of meat: so both Partes air lusers; I vensher to say that while I rund catel I lost: stolen & slaterd a nuff catel of me eavery year to hird a hired man to looked after them eavery year ; see our wild horse What good air they to enyone by the time I am get me one wild horse: I am Kill one or 2 good horses before I am Ketch the Bronko: & the Bronko gives up after his contarshen is Broken down: look at the state of Ilnois. wis, min, hird laws & eather of them states has more catel & horses then we have in this open 2 to 1 beter stalk means more money more money makes hapy Homes I would like to come & give you a call but curcamstances is so that I cant leave the Place iregating & Planting new alfalfa while the wether is faverable I ream yur Friend

Washington Notes

Mr. A. M. Ashley, inspector of the Secretary's Office, has been detached from his regular duties and given the job of rewriting the fiscal regulations. Office space will be provided for Mr. Ashley in the Forest Service building while he is engaged upon this work.

C. A. Lindstrom, in charge of exhibit work, dropped into Washington for a couple of days this week between fairs. He reports that the Forest Service exhibits are attracting considerable attention and feels that the season will be entirely successful.

A new plan for the Washington Office Service meetings has been adopted. The meetings of the heads of the different branches and their assistants are to be held fortnightly, and on alternate weeks the meetings are to be attended by all members of the Washington Office designated by the heads of branches. The object of the enlarged meetings is to give all of the men in the Washington Office, who are not in immediate touch with the general work of the Service, an opportunity to get a better line on things that are going on in other branches than their own. In addition to the usual report of the branch chiefs regarding current business, live topics will be introduced for general discussion with a hope of getting the ideas of the entire organization regarding matters affecting the general work and policies of the Service.

The first of these enlarged meetings was held on October 7, at which time the question of the relation of fire economics to fire protection was discussed. This topic brought forth varied expressions of opinion as to what could and should be done to handle the fire situation each year. The general feeling seemed to be that the fire hazard is not being lessened and that we are apt to have any year a situation which will tax our resources to the breaking point and possibly result in losses exceeding anything that we have known for a number of seasons. The answer to the situation is in intensive organization and forehanded preparation. The use of fire appropriations to provide fire fighting improvement crews at strategic points in advance of the actual fire season to a greater extent than has been done in the past instead of waiting to incur deficiency appropriations was urged.

The Forest Products Laboratory

The report of the Committee on Ties to the American Railroad Association makes the following conclusions:

1. No substitute tie has as yet been developed which can be recommended for general use on high speed insulated track.
2. The development of substitute ties should be taken up by the railroads with a view of conserving the available timber supply - of producing a track structure of longer life - which may be maintained with less labor.
3. Any statements made to urge the introduction of a substitute tie on the claim that safe track can not be maintained with wooden ties, such as will be available for some time to come, are without foundation and are contrary to the facts.

The American Lumberman of October 2 has an editorial on an article by Mr. Butler published in the same issue. It refers to this as a "masterly survey of lumber history in relation to prices" and suggests that lumbermen who desire to set the proper perspective of the industry, will not overlook the opportunity presented by this report.

District 1 - Northern District

One of the features of the Forest Service exhibit at the Western Montana National Fair was a cross section of a larch tree, with placards inviting the public to guess its age. There were nearly 500 guesses submitted. A promise was made to furnish a souvenir Forest scene to the fifty contestants coming nearest to the correct age of the tree. Explanation was made that these scenes would be prepared and sent out some time during the winter.

This is a feature of publicity work that it is expected will result in some advantage to the Service - more than the momentary attention this contest secured. The residences of these contestants are more or less scattered throughout several States, and we expect to use the names and addresses in appeals for aid during fire prevention week, and as a means also of securing wider dissemination of Forest Service bulletins, pamphlets and the like.

District 4 - Intermountain District

Mr. Kennedy of the James Oliver Kerwood Motion Picture corporation, affiliated with the National, called at the office Saturday and made inquiry concerning a suitable place in this locality for a production of a winter picture under snow conditions. He was referred to the Henry's Lake country on the Targhee which came as near filling the requirements as any place we could think of. He left immediately for Ashton to look over the location and if he decides that the location is favorable they will undoubtedly move their company in there this winter. The company will consist of about 12 persons and will be supplemented by about 100 dogs and two reindeer.

The opportunity has again presented itself for attempting to secure a comprehensive forestry law and organization for the State of Idaho. The State administration, the State Land Board, the University authorities and the large owners of timber all appear to be in the proper frame of mind to consider just what should be done in Idaho. Meetings will be held in the near future with the agencies mentioned above in order to formulate some definite plan for presentation to the coming State Legislature.

Supervisor Watts recently made some counts of reproduction on an old burn on the Weiser Forest which show some interesting facts. A part of the burn was seed spotted to lodgepole pine and Douglas fir in 1914. That part of the burn which was seeded has been closed to grazing since 1914 and the remainder has been grazed. Watts' counts on the area seeded show on one area 1,022 trees per acre of lodgepole, Douglas fir, spruce, balsam, and larch; on another 1,822 trees per acre and on a third 3,056 trees per acre varying in height from 2 to 22 inches. It is evident that most of the reproduction is the result of natural rather than artificial reseeding. Watts concludes:

"This site, however, is a striking example of the results we may hope to get in such areas after fire, provided stock is kept off. Near by areas covered by the same fire but upon which no seeding was done and which were not closed to grazing show a very limited stand of reproduction. As could be expected the burned areas are covered with fireweed and other kinds of the best sheep forage and have consequently been grazed quite heavily. The result is that only a small amount of the natural reproduction has survived. The conditions in the Fry Pan region surely indicate that big dividends in young trees will be paid by closing the larger burns to grazing for a period of five to ten years after the fire."

Are any Supervisors overlooking anything in this line?

The Secretary has approved for payment a voucher in favor of Lewis T. Quigley, Forest Ranger on the La Sal Forest, covering reimbursement for the loss of a horse while in use on official work. It appears that the death was caused by poisoning, possibly by eating a poison weed while being officially used during the period July 8 to 11, 1920.

Mr. Favre has returned to the office after a visit to Ranger District No. 5, where he and Ranger Rohwer salvaged the Clover Ranger Station. Mr. Favre reports that 90% of the material in the building was saved including about six or seven hundred shingles. This structure was completed in 1908 at a cost of approximately $400, and had no maintenance work done on it since that date. Incidentally, Mr. Favre stated that Ranger Rohwer lost most of his camp outfit on the way to the Clover Station and during the salvaging of this station the tin cans were used principally as camp equipment. However, there was plenty to eat and as the two Forest officers state they have had considerable experience as beggars, little discomfort was experienced. A bees' nest was found while tearing down the station between the outside and inner walls of the structure. The high cost of living in the Favre and Rohwer families was dealt quite a blow when several gallons of honey were rescued by these Forest officers.

- Humboldt Hummer -

Ranger Allred, who is an office visitor today, states that with the exception of one outfit, all of the sheep have left his district for their fall range. He reports that the sheep are generally in excellent condition and that the sheep allotments have without exception been left in good condition. This, in his opinion, is due both to the excellent forage year as well as improved methods of handling sheep which have been practiced on his district during the present season. He also reports that most of the lambs have been sold at Colton at prices ranging from 9-1/2 to 10-1/2 cents. Prices received for lambs which were shipped East range from 12 to 12-1/2 cents, and a few have been sold at 14 cents.

- Uinta Digest -

District 5 - California District

The Lee DeForest Co., makers of radio telephone equipment are anxious to try out experimentally some of their new sets of radio telephones under field conditions. They have a set which weighs altogether about 600 lbs., and which costs $300. They believe they can send messages by radio telephones from fifteen to twenty miles and double the distance by radio telegraph. No power plant is required for sending. They use for this small set batteries entirely, which can be charged at any garage or with any automobile.

We propose to try this experiment out with them under field conditions on one of the southern and one of the central Sierra forests. This will be a very inexpensive experiment on the part of the Forest Service.

Trinity Notes. Ranger Tracy reports that during the first week in September there were approximately 400 hunters within his district and at one time 37 machines were parked in the vicinity of Saddle Camp. One packer, with 12 head of pack animals, found it necessary to secure other pack animals in order to take care of the tourists who wanted to go into the Yola Bola mountains for hunting. Practically every one of these hunting parties has been seen personally by Ranger Tracy or one of his assistants and warned concerning care with fire. So far, not a single fire has been caused by any of these hunting parties within that district.

The bridge across the South Fork, constructed during the past month by the Forest Service with $250.00 worth of assistance from Humboldt County, contains nine tons of material and thirteen tons including the towers. It consists of two spans, the main one being 126 ft. long and the shorter span 66 ft., with an approach of 24 ft. on the south-west end.

On August 20th, L.C. Smith of Eureka, killed a doe near Island Mountain in Trinity County. Fish and Game Deputy Mellard of Leightonville, Mendocino County, was notified of this violation by local residents. He telegraphed the information to officers on the Trinity who made further investigations which lead to the arrest and conviction of Smith at Eureka. Smith plead guilty and paid a fine of $50.00

On information furnished by local residents, Guard Hansen secured what promises to be good evidence in a dynamiting case on the South Fork of Trinity River.

District 5 - California District (Continued)

Trinity Notes (Continued) Apparently, two campers from San Francisco dynamited one of the pools in this stream and secured a large quantity of fish while many others were left dead in the stream. This is a flagrant violation - one which is particularly serious because of its effect on fishing. The case is now being worked up by Hansen with the assistance of regular Fish and Game Deputies Laws and Fisher, together with other Forest Officers in Ranger McNeill's District. Further details of this case will be given later.

Some Heat! The Wind River Experiment Station has been studying the effects of fire and of temperatures. In these studies they found that a temperature of 900° F applied for 5½ hours to the thick bark of a mature Douglas fir failed to injure the cambium. THe same degree of heat killed young growth in a very few minutes. To burn the foliage of Douglas fir, a considerable amount of heat is necessary as 56 per cent of the green weight is moisture which must be removed before the needles ignite.

Competition for Rangers. The phrase "The survival of the fittest" will take on a new and more intimate meaning to the field force as a result of the Ranger examination which is to be held at various California points on October 25 of this year. Women, as well as men, are eligible to take this examination, according to the announcement by the Civil Service Commission. It may be that a new title - Forest Rangeress (or will it be Forest Rangerette) - will be in vogue next year! Who knows?

Flap-jacks a la Marx. "Last night," writes Paul J. Fair from Fresno, "we fried hot-cakes with two pans. I started them in one skillet, tossed them up and Marx caught them in the other and when done he tossed them ten feet to one of the boys sitting at the table who in turn caught them in a tin plate. Maybe we didn't have a crowd!"

District 6 - North Pacific District

After cruising 20,000 acres on the Ochoco and about 8,000 acres on the Deschutes, using four months' time and covering 3,000 miles in a Forest Service car, George A. Bright and F. W. Furst returned to the District Office, to leave almost immediately for a five weeks timber cruise on the Oregon. While on the Deschutes, they visited a little known cave 10 miles south of Bend, whose length they were 35 minutes traversing, walking fast. In some places the passage was wide and high, in others barely large enough to squeeze through. The cave floor is covered with peculiar formations, the result of moisture.

J. F. Martin, Forest Pathologist of Washington, D. C., and G. B. Posey, Assistant Pathologist, of Berkeley, California, have been in the District in conference with Dr. J. S. Boyce, Consulting Pathologist, going over the white pine blister rust investigative plans. In connection with this work they plan to study the reproduction on large burns in the District to find out to what extent gooseberry or currant bushes come in after fires. There is no danger from white pine blister rust in regions where neither of these shrubs is present.

The lately compiled 1920 fire report shows that from January 1 to September 20 there were 1,303 fires in this District, about 30% of them caused by lightning and 70% by carelessness. The damage is estimated at $39,000, as against a $250,000 forest fire loss in some previous years. Ten hundred sixty of the fires were under ten acres in extent. The hazard was above normal in southern and eastern Oregon and normal elsewhere.

The presence in Portland of the motion picture reels "Trails that Lure" and "A Pack Train Trip through the Cascades" has brought out the fact that many schools and churches are entering the motion-picture game to a considerable extent and making movie apparatus part of their regular equipment. The films have already been shown at six church services, three large grade schools, and at the Portland Central library.

As the outcome of a grazing trespass case worked up by Ranger William A. La Sater, the Chewaucan Land and Cattle Company of southern Oregon recently paid the Forest Service $451.30, - $201.30 actual damage and $250 punitive damage, for allowing cattle to graze unpermitted in the Silver Lake district of the Fremont during May, June, and July.

Exodus from Spirit Lake Camp (Columbia Forest) of 100 Y.M.C.A. boys, composing the last group to enjoy a summer outing there, took place during the last few days of September. Final report is to the effect that the 1920 season of the Y.M.C.A.'s camp for boys at Spirit Lake was one of the most successful in a history of eight years. The camp was run on a self-governing basis, with the following officers: governor, lieutenant-governor, judge, prosecuting attorney, sheriff, and councilmen.

Following the recent outing of The Mountaineers on the Olympic Forest, George Wright, chairman of the outing committee, who has traveled extensively in the less known localities of National Forests and Parks of the Northwest, wrote the following to Supervisor Fromme, showing the need of more and better trails through the Olympic Mountains:-

"Our party of eighty Mountaineers reached home safely last Saturday evening. It seemed to be the universal opinion of the party that the trip was a very successful one. That such was the case was due in large part to your personal efforts, both before and during the outing, and it gives me pleasure to make this acknowledgement in behalf of our organization.

"May I add to this letter the suggestion that you spend more money on trails? You have a region which is second to none in this state in scenic grandeur. You cannot, however, hope to have it become well known to the public until great improvements are made in the present trails.

"I have no doubt that you realize this, but it is my hope that the trail building may be expedited so that this magnificent region may be speedily opened up and become generally known to the lovers of the beautiful in nature."

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

October 18, 1920.

The Limitations and Possibilities of Aerial Photo-Mapping

The extensive use of aerial photography during the war received wide publicity, with the result that numerous suggestions are now being advanced involving the application of such methods to the mapping of the National Forests. Field Officers will probably be interested in learning of the practicability of the ideas and of the consideration being given the subject. Certainly it is worth while to investigate any new plan which might expedite the production of adequate topographic maps covering the Forests.

We still have vast tracts of land covered by nothing but crude exploratory surveys. Recent compilations show that only 20 per cent of the National Forest area has been covered by adequate topographic surveys. In addition 56 per cent has been covered by reconnaissance surveys ranging from fair to poor, and on 24 per cent of the entire area we have had no topographic surveys whatever. Good maps are essential to good administration and although the importance of the problem of hastening the map work has been recognized for a long while, we are still progressing so slowly that it will take generations at the present rate to get the maps we should have. The efforts of the Service incidental to Timber, Grazing, and other classification surveys contribute a little here and there to the accumulation of topographic information but during the last few years the work of the Geological Survey, which has been the main source of data, has practically come to a standstill on the Forests through lack of appropriations.

Naturally, the situation gives rise to the suggestions for aerial photo-mapping. Acquaintance with the difficulties, cost and limitations of such work in its present stage of development stimulates little hope, however, that an immediate solution of our problem will be found in this direction. It must be borne in mind that the outstanding success of aerial photo-surveying on the battle fronts during the war is based on conditions clearly different from those in this country. For the war zones, the most intensive topographic maps on fairly large scales were already available. These had been produced by the usual surveying methods, and during the war the mapping by aerial photography involved merely the revision of the existing maps to show new highways, railroads, camps, trench systems, etc. These new features could easily be platted on the maps from the previously established control points.

If means can be found to overcome some of the very definite obstacles now restricting photo-surveying, no vivid imagination is required to visualize the almost limitless field for its application. The more important problems to be worked out now include the following:

1. The invention of more precise spirit level attachment to indicate the verticality of the camera.
2. A more sensitive type of altimeter.
3. A suitable form of course or drift indicator.
4. Means of overcoming distortion due to errors of lenses.
5. A method of determining elevations from aerial photographs accurate enough for contouring.

These and other problems are being aggressively attacked by research and experimental work in various agencies of the Government, all of which work is closely coordinated through the Photographic Surveying Committee of the Federal Board of Surveys and Maps. During the past summer a series of tests have been conducted by the Army in cooperation with the Geological Survey and the Coast and Geodetic Survey at various points throughout the country. Several of these have produced results of practical value. One such project embraced the revision of the Santa Monica quadrangle near Los Angeles. The area had been surveyed about 25 years ago, and due to the great commercial development of the region in recent years the earlier map was badly in need of revision. The quadrangle was photographed with the Tri-lens Camera and transferred to the base furnished by the earlier map. The cost of the work was about $10.00 a square mile, including all items except outlay for aircraft and its maintenance. The results are considered as comparing favorably with the established practice of ground surveying.

An experiment on a tract without the existing maps was performed on the Schoolcraft quadrangle in Michigan. In this case, however, the large amount of cultivated land clearly outlined the public land surveys which had been previously adjusted to good control. It was relatively simple, therefore, to adjust the photographic material to the map. The results were very satisfactory as to cost but it will still be necessary to have the relief mapped by the usual methods on the ground.

The experiments so far have clearly demonstrated the practicability of photo-surveying to revise existing maps as to features of culture and to perform original surveys in flat country with well distributed control points which will be recognizable in the photographs. It has also been demonstrated that the system will have considerable practical value in correcting seaboard charts, prosecuting hydrographic studies and mapping impenetrable swamp areas. In all such work, however, control surveys and contouring must still be done on the ground.

Aside from the map standpoint, there is one advantage of the aerial photographic methods in that the resulting mosaic picture presents a wealth of information as to vegetation, forests and geological features not usually secured in connection with mapping. The value of such material relating to the Forests can be easily recognized.

F. E. Bonner

THE SUMMER HOME

Its Place In The Recreational Development Of The National Forests.

Up to five years ago, or even later, recreation on the National Forests, if the phrase were understood at all among Service men, meant simply the building of summer cottages or camps under special use permit. The one and only way for a person to enjoy the recreational resources offered by the Forest was conceived to be that he must select some particular spot in the Forest, build his own house thereon and stay in it all summer. Since the passage of the so-called Term Permit Act in March, 1915, much work has been done in the drawing up of elaborate plans and methods of procedure for the laying off, surveying out and marking tracts of land on which summer home villages could be developed and all kinds of rules and specifications have been worked out to govern the rentals to be charged, the kinds of buildings to be erected and the way in which they should be inhabited. In the beginning the Eastern District got as busy on this problem as the rest of the Service, and the opportunity to obtain a summer home site from Uncle Sam at nominal cost was widely advertised in some of the leading newspapers of the East by means of highly illustrated and attractively written articles in the Sunday Supplements. As we progressed with this work, however, we began to conceive the need of developing the recreational resources along other lines and in ways that would make the Forest accessible to and usable by a far larger number of people than if we continued in the real estate business.

It all centers around the intensity of the recreational demand - not so much what the present demand at this particular moment is but far more important - what the prospective demand in years to come will be. How many people in the future will visit the Forest each year, what their tastes and inclinations will be, what plans of development will give the best results in the way of making the recreational resources available to the largest possible number of people and along lines that will best satisfy them. As long as the area of a National Forest, or group of National Forests runs up into the millions of acres, and as long as the number of annual recreational visitors is numbered only in the hundreds, it is perfectly simple that any one of these few hundred people who want a summer home can be easily accommodated; that he can be readily allowed to select whatever site best suits his own fancy; and that there will still be ample room for the rest to roam about at will and find camping places suitable to their needs. When, however, the forest area is reduced to only a few hundred thousand acres and the number of annual recreational visitors whom we must plan to accommodate promises to run up into the millions, it is equally simple that a monopoly of a given tract or site for a permanent private summer home, or group of summer homes, to the exclusion of the general public must be allowed only when we are absolutely sure that such private monopoly will not interfere with the needs and rights of the general public and only when we are sure that such private monopoly is the highest use that the land can be put and renders it and the surrounding territory available to the enjoyment of the greatest possible number of people. Such is the situation in the Eastern District. On one Forest the condition already exists of a total area of only 425,000 acres with annual visitors running up into the millions. On the other Forests it is perfectly plain that this will be the situation in a very few years to come, on account of the numerous densely populated industrial and agricultural centers surrounding them. Even though the whole Forest area should be sub-divided into house lots there would not be land enough to give each citizen a summer home of his own, and those parts of the Forest that actually are adapted to such use are, of course, far too limited in area to go around. Furthermore, far the larger number of the people who go to these Eastern Forests now and who will do so in the future come to them as transients, not as summer-long residents. They come by motor and by train from the densely populated industrial centers, a hundred to two hundred miles away, and do not want to stay permanently in one place. They want to move around either on foot or on horseback, or in an automobile from one point to another in order to take in all of the scenery and desire as a rule accommodations only for a night or two in one place. These recreation visitors want first-class hotels where they can find up-to-date accommodations regardless of price, or they want good camping grounds where they can pitch their own tents and cook their own meals free of charge, or they want to find a public stopping place where the food is good and the beds are clean, but all the frills are eliminated so that the charges are moderate. The development, therefore, of these three classes of stopping places - of a hotel, moderate-priced road house, and public camping grounds, is far more important on the Eastern National Forests, if the growing needs of the recreational visitors are to be adequately met, than is the development and advertisement of sites for private summer homes. Some people of high authority, who have studied the situation, have gone so far as to aver that there is no room at all on the Eastern National Forests for the private summer home; that all of the lands available for such use must be reserved for the public stopping places. The Officers of District 7 do not agree entirely that there is no room at all for the private summer cottage but they do feel that the development of the three classes of public stopping places is of far greater importance and should come first. We began to recognize this very early in the recreational game and that is why during the last two or three years there has been no move to advertise private summer homes as an important feature in the recreational development of the Eastern Forests. In short, we have grown beyond the summer home stage of recreation and have for sometime been devoting all of our available energies and resources towards the development and advertisement of the other and more important features, such as those outlined above. They are still inadequate on the White Mountain National Forest, which has been a recreational center for a hundred years. In certain sections of the Southern mountains they are almost totally lacking. To encourage private enterprise to go into the mountains and develop the right sort of hotels and road houses and for the Forest Service to fix up, at Government expense, public camping grounds, the need for which becomes more pressing every year, and to advertise those facilities adequately, will tax to the utmost all of the resources, financial or otherwise, at the command of the District. The man who wants a private summer home for his own selfish, exclusive use will have to come last on the list because numerically and otherwise, he is the least important of our prospective recreational users and because of all classes, he is the best able to take care of himself, and because the land he wants is more needed by the general public.

In some sections of the Service, one argument that is advanced in favor of pushing the private summer home game is that it is a good revenue producer. In the Eastern District, the idea is gaining ground that the recreational use of the Forests should be commercialized as little as possible. The Eastern Forests are perhaps better favored than those in some other parts of the country on account of their abundant and extremely valuable commercial resources, mainly their stumpage, the sale of which is already making them practically self-supporting and will, within a few years, return an abundant surplus. There is no need, therefore, of commercializing the recreational resources. On the contrary we can plan their development along lines that will render them available to the public with the minimum of cost and restriction.

Are We Overworked?

Dear Ed-

Why all the talk about our being worked to death? As a matter of fact can we prove it - and even if we can prove it, is it so?

I honestly believe that what most of us call overwork is nothing in the world but poor management on our part. I'm talking particularly about the rangers, for I'm one of 'em and have to go up against the same sort of work every day that any other ranger has to. I'm not setting myself up as an "ideal ranger" either. If I can qualify as average I'll be lucky, and lots of times after the Super has got thru with me I feel like I'd better be glad I wasn't fired long ago.

But I'm serious about this business - and I believe that most of us can lighten our work a whole lot by giving as much care to the planning of it as we do the actual performance. Take my own case - I'm in charge of a district that has about 75,000 acres in it; there are six timber sales, about 750 head of cattle on the range, thirty miles of phone line, about 50 of roads and trails, and a dozen special uses.

Just before I was transferred here the Super sent me over to spend a month with the former District Ranger, so as to get a line on things. That was about the hardest month I ever put in. The sales were all running, the stock were coming on the range, and things opening up generally. The sawmill men were calling up every day to have logs scaled and raising Hades if they had to wait. We would ride 10 or 15 miles to get to a sale and then find only 3 or 4 thousand feet of logs to scale. The scaling wouldn't usually take more than a couple of hours, but the day would be spoiled. Most of those little mills were hay-wire outfits at best. When the owner felt like it he would get a crew out in the woods and cut a few thousand feet of logs. Then the next day he would want to run the mill. The result was that all six mills demanded at least one day's scaling a week and the Ranger was riding himself and his horses ragged and not handling anything but his sales work. He was actually working hard - and told me he was quitting because he couldn't stand the racket; said there were lots easier ways to make a living than working for the Service.

I didn't need a master mind to see a way to lighten the load - - As soon as I took charge of the district I sat down and did a little figuring. I listed all the current work and estimated as near as I could the amount of time it needed to be well takencare of. Instead of scaling on every sale every week, I planned to scale only once every two weeks. In the case of the smaller or less active mills, I cut it down to once every 3 weeks. Of course the mill men didn't like it when I told them what I was going to do. They said they wouldn't stand for it, and that they couldn't operate in any such way, etc, etc. Altogether they made it pretty unpleasant for me.

Shortly afterward one of them phoned me to come over and scale some logs. I refused to go, because I knew he had only a few thousand feet on the yard and I had told him I wouldn't be along until the next week. He wired in to the Super that I was holding up his operation and demanded that the logs be scaled. The Super didn't know what was wrong, but I'm glad to say he gave me the benefit of the doubt and wired me to know what the trouble was. What the mill man had said about the logs on the yard, coupled with the fact he knew the former District Ranger had scaled at that sale every week, made him think maybe that I wasn't onto the job. After answering his wire, I wrote him what I was trying to do and sent him a copy of my general schedule. Then I lit out for my first scaling trip.

I found the plan worked pretty well. Few of the mills had more logs than I could scale in a day, and at most of them I had plenty of time to go over the cutting area and inspect the brush, stumps and utilization.

It was getting along onto the fire season, so I told all the sawmill men that in case of fires my schedule was liable to be shot all to pieces. They didn't like that either. There was still a sneaking sort of sentiment in favor of burning the woods among some of the people, and fires were more likely to occur than not.

As luck would have it, a fire did start while I was on the trip. I phoned ahead to the mills I hadn't visited and told them I was held up by fire and wouldn't be along to scale until it was out. They got pretty sore. One of them some 20 miles away, however, turned up at the fire that night with a crew of 10 men, having come in a truck. He said, "The only reason I came was because I got to get those logs sawed up and the only way I figured I could get you to scale them was to come over here and put out this damn fire." We got a line around the fire next day and I went back to the mill with him and scaled his logs. Having those sawmill men know that they might be held up if a fire occurred helped a whole lot to reduce the fires and made it easier to get men when we needed them.

My planning worked so well with timber sales that I tried it out on other things. I spent Saturday afternoon in the office and every two weeks I put in an extra day on correspondence and other paper work. One of the places I found I was wasting time was when I'd come in from the field early in the afternoon or when I had to wait around the station for somebody I wanted to see. It's pretty easy to just sit and wait or wonder what to do in a case of that sort, and I imagine a good deal of time is lost in that way - a half an hour here or an hour there when we haven't got anything that's pressing. And yet around every station there's always a lot of odd jobs that need to be done to keep the place in good shape. I got to work and listed everything that ought to be fixed, or rather that my wife thought ought to be fixed, and believe me they made some list. Then whenever I had an extra half hour or so I tackled one of those jobs. As I finished them I checked them off and I got a surprising lot of them done too. The only trouble was that as fast as I got through with a job my wife would think of something else and add it to the list. If I happened to be tired and didn't want to do any physical labor, I'd make it a point to peck out some letters on my Oliver or to get started on some of the regular reports. I got out a lot of letters and usually had my reports in such shape that when the time came to send them in all I had to do was to add the things needed to bring them up to date - all that came later of course.

Once the sawmill men found they couldn't bluff me and that by getting a good supply of logs cut they could run the mills steady, they didn't make much of a kick, andit wasn't long before they had forgot they had ever had any scaling done every week.

Getting all that timber sale work bunched, gave me a lot of time to put on grazing and improvements. The trails and phone lines were in poor shape and it took a good deal of work to get them to where they were of real use, but the work was done in the time that was saved by planning the sale work.

The Super didn't get out to see me until I had been on the district about two months. I was starting out on a field trip the next day so he went with me. We went to the various mills and scaled up their logs, went over the sales areas, etc. Then we came back over a trail that had been cleaned out for the first time in six or seven years and when we got to a cabin on top of the range called up the station over a phone that had never given good service before. She worked that time tho. The Super hadn't had much to say when he first came out - He asked some pretty pertinent questions about what the trouble had been with the mill men, and what I had been doing, and he read my diary like he was looking for something. Evidently he didn't find it tho. When we got back home he looked thru the files and the dope I had in the basket. And when he got ready to go, he said, "Well, Buddy, now I know why you haven't been howling about how much you had to do and asking for help."

There are two things that knock my schedule "galley west" and they are special reports and visiting forest officers. It always happens that both come just when you're busiest or have some particular job in mind. I can plan my own work but I can't put my plans thru if they are going to be subject to change by the whim of somebody along the line who wants to know by next Monday how many insulators there are in the Lost Creek phone line or by somebody who wants to see what my district looks like. The last sort is the worst. You can sidestep a report, but you can't get away from the district or Washington office men. Not that I want to, on the other hand not half enough of those fellows ever come to my district. When they do they usually land there on about two hours' notice and want to go some place that will knock my work right in the head. All I ask is that they give me time to make arrangements to take care of the regular work and I'll be glad to have as many inspections as they can ring in, because I get a whole lot of good out of everyone that comes along. But I do think that when a Supervisor or inspector from the District or Washington office is going to visit a ranger district the ranger's plans and convenience should be considered and that he should have time to get his work in shape to leave it.

I've talked more than I intended to, Mr. Editor, and you'll think that I think I know everything about this rangering job that can be known. But I dont - and if you think I'm too well satisfied with myself, why - you've got a waste basket right handy.

My plan works. I handle a pretty busy district without much trouble and still have time to go fishing every once in a while. I'm pretty keen on fishing, and any plan that will give me time to go catch a few trout, when I want to, without interfering with my work, is a success in my eyes, even if it doesn't do much else. But it does a good deal more. At any rate, the Super says it does and some times when he's feeling good he calls me

Efficiency Bill -

How the Grazing Business Has Grown

In compiling grazing data for the Tariff Commission for the period 1911-1920 inclusive, it may be of interest to the readers of the Bulletin to know some of the things these figures reveal.

The number of cattle and horse permittees has gradually increased from 20,499 in 1911 to 31,301 in 1920. The number of cattle and horses has increased from 1,443,438 to 2,118,640 head. During this period the number of sheep and goat permittees has increased from 5,105 to 6,178, while the number of sheep and goats has remained fairly constant.

There were 1,142,616 sheep and goats lambed or kidded upon the Forests in 1911. A gradual reduction occurred until 1917, which was undoubtedly due to large eliminations from the National Forests during this period of lands for the most part suitable for lambing purposes. The number of sheep and goats lambed or kidded on the Forests in 1917 and 1918 almost equalled the number for 1911, while the demand for lambing privileges during 1920 was greatly reduced, as only 726,323 head were lambed. It is believed this reduction is due to unusual climatic conditions.

J. W. NELSON

The Facts about The Coeur d'Alene and St. Joe Forests.

The statement of Overhead on the Coeur d'Alene-St. Joe group in the Weekly Bulletin of August 2, 1920, is somewhat misleading both as to numbers in the organization and the various assignments. The acutal existing organization is as follows:

Number	Title	Assignment
1	D. F. Inspector	Organization and Personnel
1	Forest Supervisor	Forest Management

The facts about The Coeur d'Alene and St. Joe Forests. (cont.)

Number	Title	Assignment
1	Dep. For. Supervisor	Business Manager
2	Fire Assistants	Protection and Improvements
1	Logging Engineer*	Sales-Appraisal and Field Supervision
1	Scaler*	Sales-Marking, Appraisal, Administration
2	Forest Assistants*	Planting Sales-Marking, and Administration Timber Surveys
2	Forest Clerks	Financial Clerk-Accounts, Equipment and Supplies Property Custodian
2	Clerks (S & T)	Stenographic
13	Total Headquarters Force	

*Note:- These four men take part in actual field execution as contrasted to "Overhead". Of this, the aggregate time of two men is thus spent.

The total permanent strictly overhead force, exclusive of temporary stenographic help during the busiest season, is thus eleven.

The Yearlong Field Force is as follows:

Number	Title	Assignment
11	Forest Rangers	District Rangers
1	Fire Assistant*	Main Division-St. Joe
4	Scalers	Sales-Administration Scaling
2		From Headquarters Force
18		

*Note:- The four Ranger Districts of the Main Division of the St. Joe are all supplied from Avery, the Railroad point. The allotment plan contemplates a Fire Assistant of at least district ranger caliber to handle the dispatching job, though this year, in lack of funds, a district ranger was assigned and his district carried by a temporary man. This was formerly handled by either the Deputy or Supervisor or General Fire Assistant at Avery, and also by moving the Forest office to summer headquarters at Avery. The man there is "Overhead" in that he is a directive force but he is "Field" in that he is there yearlong and often acts for any of the four rangers in their absences on fire, etc.

The ratio under this classification is thus:

Overhead	11
Yearlong Field Force	18

The comparison of the Forests is a step but it is not complete enough to get at the basic need for the differences in overhead. Just what other factors are needed is difficult to determine for our apparently common

The facts about The Coeur d'Alene and St. Joe Forests. (cont.)

denominator is not always common. One Forest went for years with a Supervisor Clerk-Stenographer Overhead and nine district rangers. About 450 grazing permits were issued; 250 S-22 Sales; 200 Special Use Permits; 200 Free Use Permits. Another Forest handled a still larger grazing business with a Supervisor-Clerk-Six District Ranger Organization. Neither had a serious protection problem. Both now have increased overhead. Progress before impossible, is now being made.

One activity, for which no measure is indicated, is fire suppression. Protection is, of course, indirectly reflected in the number of guards but there is the additional factor of actual suppression to show. Also no indication of the comparative amounts of improvement work is given. As a further step to aid in the comparision, the suggestion is made to include the number of fires and the total number of vouchers. The latter reflects the total volume of work in all activities. The following tabulations show the vouchers for the past few seasons for the Coeur d'Alene-St. Joe group, and the number of fires for this year. The emergency season of 1920 lasted about 40 days, July 18 to August 27. This is probably above the old normal but perhaps below the average of 1917, 18 and 19.

Number of Fires by Ten Day Periods

July			August		
1 to 10	11 to 20	21 to 31	1 to 10	11 to 20	21 to 31
6	52	68	56	14	11

Total to September 1 -- 208

Number of Vouchers Handled

Fiscal Years

1917	1918	1919	1920
1923	2849	2897	3971

Total vouchers forwarded for payment, July 1 to August 21, 1920--744

While probably the only complete figures available, the comparison of F. Y. 1921 Organizations with F. Y. 1919 receipts, out, and permits issued, is less indicative for a Forest depending upon timber for its receipts than a grazing Forest. The heavy permanent overhead needed to handle a 40 or 50 million foot cut is carried through a period of depression when the cut drops to 30 million. On the other hand the grazing business is fairly stable, for permittees are prone to keep up their preferences by constant use. Also the increase in grazing fees came about before increased stumpage values were effective.

A later comparison for the Coeur d'Alene-St. Joe group is as follows:

Timber Sale Business

Fiscal Year	Cut	Value
1920	33,000 M	$ 85,000
1921	65,000 M	165,000 (Estimated)

What does the comparatively large overhead do that cannot be exactly shown in terms of business accomplished?

The Facts about The Coeur d'Alene and St. Joe Forests (cont)

The answer lies in measuring and demonstrating in common terms the work involved in the protection problem, including improvements, and the Forest Management problem. Cut down the overhead in number or in quality and progress ceases in both in proportion.

C. K. McHARG

Albuquerque Tree Planting Plan

The Albuquerque Chamber of Commerce in cooperation with the Forest Service worked out and carried through a tree-planting campaign in Albuquerque which produced some excellent results. An outline of the plan may be of value to other communities. The main idea of the plan was to secure the planting of as many shade trees in the city as possible under conditions which would insure good results. The details of the Plan were as follows:

(1) A commission composed of interested citizens, city officials, and local foresters drew up complete specifications, including storage rules, planting rules, list of species approved for planting, sizes, time of planting, size and depth of hole, method of watering, etc.

(2) Competent tree planters were given a list of these specifications and asked for bids as to the cost per tree for doing this work. Their prices when submitted were investigated and, if found to be reasonable and the bidder had a good reputation for reliability, he was certified by the Chamber of Commerce. Through publicity the public was informed of the plan, and the certified planter given free advertising. Each certified planter then solicited the property owners for orders.

(3) The planting stock, stock storage, and planting operations of the certified planters were inspected regularly by a technical forester furnished by the Forest Service to see that the work was done in accordance with the specifications. Failure to comply with the specifications, as interpreted by the Inspector, resulted in withdrawal of the planter's certificate and notification of the public of such withdrawal. The scheme as worked out resulted in better stock, better species, a great increase in the number of trees planted, and a much better grade of work in planting them. An inspection of the work this spring showed from 90 to 95% survival which is very high for this climate.

QUINCY RANDLES
Forest Examiner
Dist. 3

District 2 - Rocky Mountain District

The seeming slump in many industries at the present time is somewhat reflected in the number of applicants for stenographic positions with Uncle Sam. While the ratio of clerical turnover is still very high, the Chief of Maintenance is called upon many times a day to interview persons desiring to get their names on the Government pay roll. If the present tendency continues, the Chief of Maintenance will have to devise some other scheme than that of filing their names under the corner of his desk blotter.

The Purchasing Agent for the cooperative purchasing work is wondering whether or not he will have to get out a revised schedule of prices following the announcement of the leading motor producers and mail order houses of the spectacular drop in prices of their commodities. The scheme for cooperative purchasing has veen found to be more practical than even its initiators imagined and there is no reason why it cannot work with equally as satisfactory results when the markets again become stabilized as it did during war time on inflated markets.

Brush on the Wagon Wheel Gap Experiment Station area was burned last month. This was cut and piled a year ago. The experiment was to determine the effect of timber on streamflow, and the watershed was denuded, leaving it entirely bare. The stream has been measured for the past ten years, and if there is any change it can be easily determined.

A local newspaper in commenting on the experiment calls it a piece of gross extravagance on the part of the Government to spend thousands of dollars to find out something that everybody already knows.

The Ten Days Fire Reports and telegrams received from various Forests in the District indicate that we may have considerable trouble before the season is ended. On October 11 two fires of considerable size were burning in the Superior Forest, and conditions were reported as being serious on the Arapaho, Bighorn, and Black Hills. This has been a long, open fall with continuous dry weather for many sections.

Even though Fire Prevention Day, October 9, has been set aside specifically in the interest of reducing fire losses in the cities and communities, it appears that the Forest Service and its fire prevention must be unconsciously connected with all fire prevention in the minds of many people because we had two requests for addresses for that day. One came from a teacher in the South Side High School of Denver and resulted in the assignment of a speaker to give a short talk with slides before the school children; and another came from a citizen of Greeley, Colorado, for a similar talk before school children and their elders at two different meetings on October 11. Despite the fact that we explained in both cases that our talk would necessarily be on Forest Fire Prevention rather than on the problem as it appears in the cities, the persons making the requests were still very anxious that the addresses be given.

This indicates very pleasing progress in the campaign for Forest protection which is taking on more and more of a national character.

District 4 - Intermountain District

Ranger R. H. McDougall appeared in this office on the morning of October 5 accompanied by a Basque camptender, who gave his name as Francisco Alluntis. Ranger McDougall reported that he had discovered Francisco with more fire on his hands than anyone could conveniently handle. Alluntis in accordance with the usual custom, had gathered considerable sagebrush and dug a hole preparatory to making the weekly batch of bread, but on account of the unusual gale of wind, the burning brush was scattered, eventually burning over four or five hundred acres of land inside the Forest boundary. It was agreed that Francisco had been careless but not intentionally so and after securing an interpreter, the case was settled by the trespasser making payment of $10.00 for actual damages. Francisco was noticed on the street busily engaged waving his hands, shaking his head and altogether looking as though he had made a very narrow escape. He was informed that repeated carelessness with fire would probably land him in jail. This is the first fire of any consequence reported inside the Forest this season, though several have been noticed in the mountains north of the Toiyabe Division on outside territory.

--Toiyabe Telegram.

House for Rent: A policeman who was noted for taking no chances said to a prisoner as he was leaving the dock after just having been sentenced to six months: "Excuse me, but do you want to let your home while you're away?"

"Ranger" versus "Senior Forest Aid":

Rangers will be interested in Mr. Barnes' article headed "Will We Stand for This" in the last issue of the Weekly Bulletin. It is quite obvious that the title "Ranger" is no longer exactly descriptive of the position and the activities thereto attached, but, does "Senior Forest Aid" more accurately describe this exceedingly versatile member of the force? It does not. Nor will the public hasten to adopt the new title. The obsolete "Forest Reserve" has persisted for 13 years and more than half of the Forest users still use this term in speaking of the National Forests. After all, the farther we get away from such titles as Manager, Supervisor, Superintendent, etc., the more we confuse the public. The title "Forest Ranger" had a compelling force in the beginning, doubtless on account of the traditions and fame of the Texas Rangers. It was therefore readily adopted by the Western public and its possessors have earned for it a permanent place in the history and literature of the West. The title invented by the Reclassification Commission has no such force behind it, and, since it is hardly a more logical title, why try to use it? We venture the prediction that people will still call them "Forest Rangers" when the aeroplane shall have supplanted the cayuse and the Ford.

BUT, if the title must go with the proposed salary increases, most Rangers will no doubt meekly submit - "A rose by any other name, etc." - Oh, Absolutely. -- Lemhi Ranger.

WANTED: "To trade at sacrifice. Will exchange $1220 statutory position period November to March, inclusive, for $250 Improvement funds. A two to one shot. Act quick, Sawtooth."

Note: Mr. Benedict failed to state whether the place he is offering is one of those belonging to the Sawtooth or whether it is the "floater" place loaned to the Forest for the field season. At any rate, the waiver of the $250 should be transmitted through the District Office. 10% or 20% reductions are made in the case of transfers unless the purchase is a Class A man.

A general storm throughout Western Wyoming occurred during the period of September 21 to 26, which resulted in eliminating all future fire danger for this year. The snow on the higher elevation within the Forest reached a depth of two feet in many places. This unusual fall of snow caused a considerable anxiety on the part of some of the Flockmasters, since their sheep were snowed in and unable to move for several days. The storm was followed by a very warm period which melted away a large portion of the snow which allowed the sheep to trail out without very much hardship.

-- Wyoming Wizzard.

Decision in the Bear Valley Cases;

In the United States District Court at Boise the consolidated cases of Charles H. Smith and E. M. Hussey, involving occupancy tresspasses during the past two years in Bear Valley upon the Payette Forest, came on to be heard before Judge Dietrich. The injunctive relief prayed was granted by the Court. Damages of $75 each from the two defendants were allowed. Our inability to prove a greater damage was due to the fact that a portion of the information possessed by the Forest officers was not within their personal knowledge and, therefore, was ruled out as being hearsay. The trespassers are required to leave on the land all improvements belonging to the United States erected by them including houses, barns, fences, etc. They will be required to remit to the District Fiscal Agent $75 each before disposing of or removing the hay at present on the land. In the event that they do not remove from the land ouster will take place December 1. Immediate steps are being taken against the other ten recently acquired trespassers in Bear Valley.

The following incident has been reported by one of our road crew. A Ranger who was on his regular beat was accosted by a fellow in this way. "Say PARDNER I hev jest kilt two fine deer over there on the ridge, come along with your horse and help me fetch em in and we'll go havers! The Ranger perked up a little and said "Say, do you know who I am? I am the Deputy Game Warden", to which came this reply. "Do you know who I am? I am the biggest liar in Wyoming." -- Wyoming Wizzard.

The Acting Secretary of Agriculture signed the cooperative agreement covering the Ketchum Section of the Ketchum-Clayton Road on October 4. Work on the project will be started this fall.

District 4 - Intermountain District (cont)

Mr. Scott has returned from the Idaho and Utah State Fairs, where comprehensive Forest Service exhibits were installed and demonstrated. He feels that both of these exhibits were quite thoroughly successful. About 25,000 people visited the exhibit at Boise and probably twice that number or more at Salt Lake. A very gratifying degree of interest on the part of the public was apparent at both exhibits and much favorable comment was heard. Also, several good ideas were picked up which will help us to make our future exhibit work more effective. A great deal of credit for the success of these exhibits is due Supervisor Campbell, who assisted in the work at Boise, and Deputy Supervisor Arrivee and Forest Ranger George A. Green, who helped out on the one at Salt Lake. Telephone Engineer Adams' demonstration of the wireless telephone was a feature of special interest at the Salt Lake exhibit. He is also now back in the office.

District 5 - California District

By request of the Secretary of the Interior through the Secretary of Agriculture the Forest Service is to make an examination of the redwood region in Humboldt and Mendocino counties to determine the suitability of areas for a proposed Redwood National Park. Mr. Hammatt is to be in charge of the work. In order that the party may fairly represent State interests, Professor Bruce of the University of Calif. and M. B. Pratt, Deputy State Forester, will accompany Mr. Hammatt. The expenses of the trip will be defrayed by the "Save the Redwoods" League. So far as is known this is the first time the Forest Service has been requested to make the initial report on any National Park proposition.

A photographic album is to be prepared in the Office of Research to illustrate the various stages in the progress of permanent sample plots. The sample plot areas have been photographed two or three times now successively at five year intervals and space is being reserved for future photographs to be taken at five year intervals when the remeasurement work is done.

Recognition for Good Work in Timber Sales. The timber sale authorizations of Supervisors J. V. Wulff, J. R. Hall, M. A. Benedict, and R. L. P. Bigelow have been increased. This action has been taken after a careful review of the results of inspection of Forest Management work under way on the various forests during the past year, and as recognition of good work.

The following letter to the District Forester typified the spirit we are endeavoring to instill into the minds of the younger generation:

"West Berkeley, Cal.,
October 5, 1920.

Dear Sir:

"My friend and myself would have liked to become "Forest Guards" but being High School students, we could not spend a great length of time in the forests.

"We go on a great many camping trips, and see young trees destroyed and camp-fires built in dangerous places by thoughtless hikers. If we try to stop them and tell them of the danger, they ask us where our authority is at, and walk away.

"As it is impossible for us to become regular "Forest Guards" we would like to know if we could act as "Guards" while on our camping trips. We want nothing and ask for nothing but the permission to help protect the forests of California, wherever and whenever my pal and myself decide to go camping.

"Waiting for an answer soon; in our favor; I remain,

William Surges,
643 Gilman St., West Berkeley, Calif."

District 6 - North Pacific District

The Forest Service in this District is making a canvas of the needs of the logging industry for oil for donkeys and locomotives, with the intention of exerting its influence toward the setting aside of a sufficient supply for such needs during the oil shortage.

A party of logging engineers will visit the sugar pine regions of D-6 during October, to investigate the adaptability of Oregon logging methods to India, according to Charles Gilbert Rogers, head of the commission, who has preceded it to Portland. The party, which has been observing timber operations in Idaho, includes 16 engineers, appointed to study the American system of mechanical logging for the benefit of the industry in India. According to Mr. Rogers, logging in India is at present dependent upon elephants and unreliable streams; reforestation is impossible; only teak is logged (although other hardwoods abound) and soft woods are inaccessible.

Under the caption "Hints for Motorists in Rainier National Forest", Ranger Mark Brunn, of the Wenatchee, ran an interesting half-column series in the Yakima Daily Republic, effectively arranged under the following subheadings:- "Conditions of Roads"; "Tip About Fishing"; "Watch for Fires", "Huckleberries? Yum!"; "A Trail to Goose Egg"; and "Six Men on Job (referring to Ranger Brunn and the five guards who assisted him during the fire season in safeguarding his district, the Tieton).

The Sparks Lake Road, leading into the Cascade Mountains from eastern Oregon and built by the Forest Service and Deschutes County, is now completed, it makes accessible five hitherto inaccessible mountain lakes, approaches three high peaks, and passes glaciers and an interesting specimen of Indian picture-writing. The estimated cost of this road, which extends 28 miles, is $10,000. Six thousand pounds of War Department TNT was used in its construction. It was begun by Forest Supervisor Jacobson and finished by his successor, H. L. Plumb. The Road was located in 1919, by Forest Examiner W. J. Sproat.

Mount Baker, 10,730 feet high, was unusually hard to climb this season, according to Ranger James Wallace, in whose district it stands and who personally guided the first visitors to the top, on August 11. Thirty feet less than usual of snowfall last winter left many rocks exposed that should have been well covered with snow. Also impassable newly formed crevasses were found. Men who attempted the ascent on September 3, had to give it up because of storm and trails made impassable by the summer thaw. However, Mr. Wallace estimates, in his report to Supervisor Park, that 156 men and women climbed the mountain between August 11 and September 3.

On October 5, Major Guthrie returned from a two-months trip in Alaska. He spent some time on the Tongass, with Colonel Greeley and District Forester Cecil, and the rest in the interior and on the Chugach Forest. From Cordova he went by trail to Fairbanks, took the Government railroad to Nenana, rode horseback 108 miles to Anchorage, and returned on the Government railroad to Seward. During the horseback trip he had a wonderful view of Mount McKinley and its environs and is convinced that the region will be a favorite with tourists when the railroad is completed. He says that gold mining now is dull, owing to the low value of gold, and that the people are taking the keenest interest in the proposed development of the pulp industry.

Special mention of Bull Run water and its source, on the Oregon Forest, is being made on the dining-car menus of the Spokane, Portland and Seattle Railway and the water featured in bottles labelled with a picture of Mount Hood and the words PURE BULL RUN WATER.

Grazing Examiner W. R. Chapline recently delivered an address at the Oregon state fair, before the Mohair Goat Association, which was calculated to stimulate interest in the mohair goat industry on the Crater, Siskiyou, and Siuslaw Forests, where range exists for several hundred thousand goats.

Dr. R. K. Strong, the new head of the industrial chemistry department of Reed College, Portland, has been given information by the Office of Products on the chemical utilization of wood waste. Dr. Strong draws the conclusion that Portland is the logical center for a greater manufacture of pulp and paper from the fact that Oregon possosses 20 per cent of the standing timber in the United States and that about four and a half per cent of the Nation's consumption of paper is produced in the Pacific Northwest. He estimates that 5,000 tons of pulp could be made monthly from the waste at the saw mills in Portland.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

October 25, 1920.

"Shaking Results" Out of an Opportunity

How many rangers through their lone efforts have organized a stock association? How many forest officers in the short space of five years' time have brought about the development of a strip of mountain country popularly condemned for years as worthless for grazing purposes, into a grazing unit of no mean economic value, which today supports 1200 head of cattle and horses fed during the winter season on products from the nearby ranches of community builders? Quite a remarkable achievement. But this is not all. District Ranger A. G. Angell of the North Powder district of the Whitman Forest has accomplished even more surprising things along grazing lines.

Ranger Angell is a man with a vision and has no aversion to a lot of good, hard work. The district over which he has charge is characterized chiefly by its thickets of bug-killed lodgepole and its fine stands of lodgepole reproduction; also by the large amount of stock grazed in that type of country. This is especially true of the North Powder Cattle and Horse Association range. When he went on the district this range was practically unutilized. He believed it could be developed. Having the courage of his conviction he set about the job. After learning the country thoroughly, a grazing management plan for the area was written and maps made in regulation form. Among other things the plan called for the seasonal grazing of areas situated at varying elevations and at different slopes, a systematic distribution of salt logs and an even more systematic plan for range riding to assure correct distribution of stock over the allotment. It called for construction of herders' cabins and for enclosing of pastures for herders' horses. It specified the amount of salt to be placed in each of the forty logs, the future locations for which were shown on the regulation map. It called for the employment of two herders throughout the grazing season. Last, but not least, Ranger Angell made sample plot studies, a la Jardine, and deduced therefrom the grazing capacity of the range. Now don't be skeptical and say that it is easy to write a plan calling for such finery but a different story to secure execution of such a scheme. The story in this case is just that different--execution did materialize.

In the meantime he had convinced the ranchers around North Powder of the advantage of raising more stock by getting the animals off of the ranches during the grazing season. They were doubtful about stock living on lodgepole, but finally decided to take a chance. Next in order was the organization of an association. No group of self-respecting stock growers can graze animals on the Whitman unless they bargain by the collective process. With urging by Angell the association was born, and it was born a right-up-to stuff organization.

To illustrate the materialization of this plan and the "stuff" of the association, here is an instance: It has been noted that the plan called for the employment of two herders continuously throughout the grazing season. Besides providing them, the Association at the suggestion of Ranger Angell goes a step further by resolving, with a whereas now and then, that to have individual owners herding their stock on the range, or even visiting the range for the purpose of looking over their stock, would interfere with the best interest of all concerned. Owners must secure permission from the boss herder to enter the range. Even though a permittee desires to remove his stock upon a given date, he is prohibited from doing so by this Association rule. The herders have exclusive control of the stock while on the range. This applies to all permittees, from the man who has held a grazing permit annually for the past 8 years covering one lone horse of doubtful age, "Shaking Results" Out of an Opportunity (Cont.)

to the owner of 190 head of North Powder River's best beef producers. Incidentally, Ranger Angell, as will be shown later, has exclusive control of the herders.

The Association members assessed themselves last spring at $2.00 per head for all permitted stock. This assessment has constructed two good, substantial houses and furnished them with stoves, beds, dishes, etc. It has enclosed two pastures with a mile and one-half or more of John Day pole fence, has hired the two herders, has furnished 7200 pounds of salt, more or less, and the Association has money left.

This story becomes more interesting as it lengthens out. Ranger Angell has actually succeeded, by leading out on unromantic jobs of hard work to get honest-to-goodness Powder River cowpunchers with high-heeled boots, chaps and other decorative regalia, off their bronchos long enough to dig out 40 regulation salt logs, having capacities ranging from 200 to 500 pounds of salt; to cut out and mark through the lodgepole thickets about 16 miles of ways across the range, to construct the one and one-half miles of fence; and to assist him in the construction of the two houses. On the building projects Ranger Angell did all the fancy work of framing, etc., while the broncho twisters put up the boards. Cooperation? I'll say so!

But there is more to tell about the exceptional accomplishment made by the management of the North Powder Cattle and Horse Association range. These fence-building twisters work to a schedule outlined by the District Ranger. The schedule calls for two days' work on improvements each week, two days on salting and two days riding to distribute stock over the allotment in accordance with the plan.

It might be assumed by readers that the members of the North Powder Cattle and Horse Association are not ordinary human beings. Quite the contrary. They are as skeptical as, but more generous with their money than, the general run of stockmen. Two riders on a range is a new departure to these beef growers. They became inquisitive and called upon Ranger Angell to tell them just what the herders do while on the range besides to warm their shins in front of a camp fire. Ranger Angell said to himself, "Here is where I square up. To write a daily diary is a grinding job. Uncle Sam has ground me now for eight years. I'll share this misery," which he generously did with two herders. While on the range during the past season they have written a daily diary in duplicate. A copy goes to the Secretary of the Association and one copy to the Supervisor. The Association members, through their Secretary, now know exactly how the boys are spending their time, how much salt they put out and where they put it, and are satisfied. Can you beat it? Who says the district ranger cannot make himself a man of some prestige in a community?

A factor of no small consequence as an outcome of Ranger Angell's plan of management is the fact that the herders after three years of service and in view of their close association with Forest officers and their intimate knowledge of Forest Service regulations, have come to feel that they are mighty nearly a part of the Forest organization. They render invaluable assistance in many ways to Ranger Angell. In the matter of fire prevention they are, in fact, almost as much of an asset in the country as two regularly-paid Forest Service firemen would be.

E. W. KELLEY.

When is a Sheep Picturesque?

A summer visitor went up into a National Forest for his vacation. He was horrified to find sheep and cattle using the grass and forage plants on the mountains of his fair State. He was so wrought up over it that he wrote a letter to the paper, to wit:-

> "The recreation map of the _________ National Forest issued by the Government tells us the following:
>
> 'The National Forests are the recreation grounds of the Nation. The National Forests delong to the people. Do not impair the value of your property by damaging it.'

> The cattlemen get what almost amounts to free pasturage in the finest grazing land. Do we get our beef, mutton, and wool any cheaper on that account? We do not. Are we going to silently submit to having our recreation grounds infested with stock? I for one am not. I am going to try to start something, and I hope that you will publish this in your next issue."

Which the editor obligingly did. This summer visitor was no doubt consumed with righteous and honest wrath,- he really felt peeved. But suppose he'd spent several thousand good American dollars in taking a trip to Switzerland or the French Alps. There he would certainly have seen cattle and sheep, yes, and even goats, on the fair landscape. Do you suppose he would have become excited about it? My guess is that he would not. On the contrary he would probably have thought said sheep and goats added a picturesquo touch to the landscape.

Now the point is this - that it is up to us to educate the American forest-using public to the facts that they're going to see cattle and sheep, and maybe a goat or so when they go up into the mountains of a National Forest; that the animals are there under permit; that they are there because there are forage resources to be utilized, which would be doubly criminal to allow to go to waste or become a fire trap; that the fact of their being there means that the summer visitor will get his meat, his wool clothes, and his shoes cheaper; that this livestock is there because of a sound economic reason; that the owner is paying for the forage used; and, moreover, that this American livestock adds a picturesque and interesting note to the mountain landscape of the West just as much as the same animals do to the mountains of Switzerland, of the French Alps, or the Pyranees. How are we going to accomplish this education? By putting somewhere in every recreation folder, booklet, or other publicity matter a statement that the particular National Forest being described is the summer range for a certain number of sheep or cattle, that this stock use this range under paid Government permit, and also by including illustrations showing cattle or sheep using the mountain ranges. If the tourist knows what's coming he won't be shocked. It all depends on how you educate your public.

Years ago we learned the necessity of excluding sheep from summer home-site areas and camping grounds,of protecting water supplies, and of building roads and trails - The mountain ranges of our National Forests are big enough to take care of the recreationist and the livestock. And remember that the stockman pays for his forage - the tourist gets his use free,- and isn't over careful of his fire, either. There's been a lot of bunk written about "preserving the wild flowers" from the "hoofed locusts."

We have a responsibility and a privilege here to change an un-American squeamishness into a sensible and wholesome regard for the wise use of all of our National Forest resources,- timber, water, forage, scenery, recreation. Are we going to make the most of it?

JNO. D. GUTHRIE.

Mr. Cobbs:

Team Work! You said it!

I want to add a fervent Amen to what Mr. Woodbury says on team work in submitting reports. This is a tender point with me because I do not remember a single one of the important sets of reports I have handled in Washington which has not been marred by the delinquency of one or more Districts. On several occasions this has been very embarrassing, and it has often caused a good deal of additional work or forced a change of plan on account of lack of complete information.

The Branch of Operation itself, has a score that is far from perfect as regards promptness in answering correspondence. If you will call our attention to instances of delay in handling your letters or other matters, it will help us in reforming our habits. It will be good discipline for us.

Team Work! You said it! (Cont.)

Another thing which will help materially in enabling us to find the time to keep our work right up to the minute is to submit reports to Washington on the dot.

I heartily agree with Mr. Woodbury about the use of discipline in bringing about the desired change of mental attitude, but since we can only recall one or two Districts which have not sinned grievously in this respect in the last year, our question of discipline is not simple.

A method used successfully, I understand, in District 2 for a good many years is the publication from time to time of statements showing the promptness with which reports are submitted by different Forests. I wonder if we published such a record for the submission of Operation reports it would serve as an aid to the formation of the better mental attitude.

ROY HEADLEY.

More Progress

Another important meeting bearing on the program of national forestry was held in New York on October 21. At the invitation of Seccetary H.P.Baker, of the American Paper & Pulp Association, a number of foresters engaged in commercial, educational, State, and Federal work gathered around a table to discuss the essentials of a State forest policy. The result was the preparation of a statement of some ten or a dozen fundamental principles, the most important of which is one declaring that the State should establish essential requirements in protecting timber and cut-over land from fire, in reforesting denuded lands, and, where and to the extent necessary, in the cutting and removing of timber crops by such methods as will promote continuous production of timber on lands chiefly suitable therefor. The statement will be submitted to the Association's Committee on Forest Conservation, which will in turn submit it in the form approved by that Committee to the Association at its annual meeting in Chicago on November 11. Those who attended the conference included R. S. Kellogg, member of the Association's Committee on Forest Conservation, H. P. Baker, Secretary of the Association, O. M. Porter, Assistant to the Secretary, F. H. Colby, Forest Commissioner of Maine, Philip Ayres, Forester of the Society for the Protection of New Hampshire Forests, F. F. Moon, Dean of the New York College of Forestry, R. S. Hosmer, head of the Cornell School of Forestry, C. R. Pettis, Superintendent of Forests, New York State, Alfred Gaskill, State Forester of New Jersey, J. W. Toumey, Director of the Yale Forest School, and J. G. Peters, representing the Forest Service.

This meeting was preceded by one on October 15, also at New York, at which, under the auspices of the same Association, a number of commercial interests, with representatives of the public, including the Forest Service, formulated a statement of Federal policy.

J. G. PETERS.

More Useless Oaths of Office

The Weekly Bulletin of September 20 contains an article by Miss Julia T. Shinn, Principal Clerk of the Sierra Forest, regarding the number of Oaths required from a stenographer on that forest in a period of two years. On the Manti we have a stenographer who has completed five Oaths of Office in a period of eighteen months, which beats the Sierra record for that length of time. Our present stenographer and typewriter was given a temporary appointment at $900 per annum April 1, 1919, on the Sevier Forest, (Oath No.1). She was given her probationary appointment June 16 the same year, (Oath No.2). May 16, 1920, she was promoted to $960 (Oath No. 3). July 16, 1920, she was promoted to $1020 (Oath No. 4), and again October 1 she was promoted to $1100 (Oath No. 5). While the young lady in question may be willing to furnish a new Oath every thirty days, providing the necessary promotion follows, yet, what's the use of going to that unnecessary trouble and expense?

According to the Daily News, the last promotion received by the District Fiscal Agent made it possible to promote eight other employees. This means that eight Oaths of Office had to be executed while no new employee had been added to the rolls. The only argument in favor of the present order, as I see it, is the help given to individuals holding commissions as Notaries.

Ontario Government to Operate Pulp Mill

"The Fort William Times-Journal of October 5 announced the decision of the provincial government of Ontario to erect a pulp mill in the vicinity of this city, using power from the Nipigon hydro-electric development. Plans have not advanced to a stage where the exact site has been decided upon or the capacity of the plant fixed, but Toronto advices to the Times-Journal state that it isuunderstood the Government operations in the woods on the north shore of Lake Superior will include the establishment of a paper mill, sawmills, and kindred industries in addition to the pulp mill. To quote the newspaper further:

'The plans will be operated under direct Government supervision to take the cut off the immense reserve around Lake Nipigon - which, according to measurements on the last Government map of Thunder Bay district, includes a block of territory 8,480 square miles in size - on a strictly modern plan. Fire protection and reforestation methods will be put into operation as actual examples for private companies to follow in taking off timber in other sections of northwestern Ontario.

'The plan has been under consideration for some time and experts have been cruising the territory. The big undertakings planned, it is pointed out, will absorb a vast block of the power developed by the Government at its hydro-electric installation at Cameron Falls, in the Nipigon district. It is said there is a possibility that the Government may consider a site for the paper mill on the block of land between the cities of Fort William and Port Arthur owned by the MacKenzie and Mann interests'".

COMMERCE REPORTS

Australia Saves Timber Lands

The Australian Government has recently shown its good judgment by refusing to open to settlement valuable timberlands on the Bulga Plateau to returned soldiers, because the lands were so far from market that the timber which would necessarily be cut in clearing could not be utilized. This decision constituted a reversal of position on the matter and was not reached until some of the lands had been settled upon in accordance with the previously decided policy. The prime factor which was responsible for the decision to retain the timber was the conditions existing in two other districts where settlement has progressed only at the cost of great forest wealth which was burned in clearing. In these two districts the settlers were so far from market that the timber, which was badly needed in other places, had no value. Commenting on this situation the Australian Journal of Forestry says: "The settlers cannot be held blamable as they were allowed to take up their blocks in the heart of forests of magnificent hardwoods and in the valuable softwood brush. They could do nothing until the timber was disposed of and in the absence of good roads, timber mills or railways, there was only one way to dispose of it--by cutting and firing. It was only another case of settlement preceding railways, but the destruction of millions of feet of the best timber in the Commonwealth was the price paid for it."

The Bulga State Forest comprises about ten thousand acres of magnificent timber, and 12,840 acres of Crown lands adjoining were subdivided for settlement into farms for returned soldiers. The result of a stock taking of timber resources, however, showed that instead of being unlimited, as had been formerly thought, they were very much smaller than they should be. Although the area in question had been subdivided and intersected with roads at great expense, the Minister of Lands finally determined that the tract would not be opened.

Rotary Clubs Back Forestry

An active campaign in support of the Forest Service and in favor of the adoption of a National Forest Policy has been begun by the Rotary Club of Colorado Springs. As a result of its efforts the 21st District of Rotary, embfacing Colorado, and portions of Wyoming and New Mexico, has adopted the following resolutions

Rotary Clubs Back Forestry (Cont.)

"WHEREAS:

The preservation of the present timber resources of the United States is a matter directly affecting our National Welfare and that of the existing generation, and

"WHEREAS:

The future use of timber in its varied forms is of first importance to succeeding generations, and

"WHEREAS:

It is one of the cardinal principles of Rotary to promote and to foster those things which are of the greatest benefit to mankind now and hereafter; therefore be it

"RESOLVED:

That the Presidents and Secretaries of the Clubs of the Twenty-first District of International Rotary, in convention assembled, recognizing the importance of this matter, approve the efforts of the Rotary Club of Colorado Springs, Colorado, in its movement to gain the support of the people of the United States to the end that the Forest resources of our country may be not only intelligently preserved but that they may be developed for the use of posterity.

"We pledge ourselves to call the attention of our respective clubs to this vital matter and to suggest a forestry meeting during the present year in the hope and belief that the Rotary Clubs of this District may enlist the interest of International Rotary in the support of this great work and that through this influence our National Government may be brought to a full realization of the wisdom of developing this, our one great renewable resource."

A committee on Forestry has been appointed by the Colorado Springs Club and is backing up the work of the Forest Service in Colorado with particular reference to reforestation and the continuance of the investigations carried on at the Fremont Experiment Station. At a recent luncheon of the club District Forester Peck, Supervisor Philips and Mr. C. G. Bates made talks and were enthusiastically received. At the same time Congressman Timberlake, who was also present, spoke of the change of sentiment which has taken place regarding the Forest Service and promised his hearty support in furthering the program proposed by the Rotary Club. The features of the luncheon were the decorations which consisted of tiny trees in flower pots. These were auctioned off by the Chairman of the Forestry Committee and were bought by the Rotarians at $5.00 each. The proceeds will be used in carrying on the campaign and in interesting other organizations in the movement.

The Rotary Clubs offer an unusually good opportunity to bring the work of the Forest Service before the business men of the country. The clubs are composed of representative men from all kinds of activities and the members are ordinarily the live wires of the community. They have a reputation for putting through the things which they undertake, and the support of the Rotary Clubs to any movement is usually enough to guarantee its success. Any opportunity which comes to get the Rotary organization interested in the work of the Service is certainly a bet which should not be overlooked.

Some Timber Sale "Figgers"

For the benefit of those who are interested in statistical comparisons, there are given below figures taken from a tabulation recently prepared to show (primarily) the timber sale business for the fiscal year 1920 for the ten highest forests.

Some Timber Sale "Figgers" (Cont.)

Net Receipts all Sources

1.	Coconino	$161,863	D-3
2.	Plumas	121,499	D-5
3.	Whitman	119,252	D-6
4.	Coeur d'Alene	106,480	D-1
5.	Lassen	95,018	D-5
6.	Tongass	94,210	D-6
7.	Shasta	89,385	D-5
8.	Crater	81,074	D-6
9.	Tusayan	76,201	D-3
10.	Stanislaus	76,040	D-5

Net Receipts Timber Sales

1.	Coeur d'Alene	$105,854	D-1
2.	Whitman	96,806	D-6
3.	Plumas	91,580	D-5
4.	Coconino	86,737	D-3
5.	Tongass	79,878	D-6
6.	Lassen	78,150	D-5
7.	Shasta	75,843	D-5
8.	Kaniksu	73,431	D-1
9.	Crater	69,579	D-6
10.	Medicine Bow	53,484	D-2

M Feet Timber Cut Commercial Sales

1.	Tongass	41,471	D-6
2.	Plumas	34,384	D-5
3.	Whitman	33,985	D-6
4.	Shasta	31,707	D-5
5.	Coeur d'Alene	31,457	D-1
6.	Coconino	29,469	D-3
7.	Columbia	26,737	D-6
8.	Crater	21,416	D-6
9.	Lassen	21,404	D-5
10.	Kaniksu	21,120	D-1

Average Price per M Feet Timber Cut Under Commercial Sales

1.	Minnesota	$5.89	D-2
2.	White Mountain	5.56	D-7
3.	Ozark	5.36	D-7
4.	Alabama	4.94	D-7
5.	Cherokee	4.01	D-7
6.	Beartooth	3.90	D-1
7.	Kaniksu	3.41	D-1
8.	Pisgah-Boone	3.36	D-7
9.	Santa Barbara	3.34	D-5
10.	Beaverhead	3.20	D-1

Summary by Districts

	Commercial Sales M feet cut	Average Price per M feet
D-1	120,839	$2.49
D-2	111,203	2.35
D-3	87,195	2.44
D-4	31,773	2.14
D-5	143,066	2.30
D-6	242,272	1.78
D-7	46,977	3.21
	783,325	$2.24

Some Timber Sale "Figgers" (Cont.)

District 4 is entitled to the prize for lowest figures on the following counts:

Smallest net receipts timber sales on the Bridger - $29.79
Lowest average price per M feet on the Teton - - - .89

District 7 gets the same prize for the lowest cut in commercial sales, 4 M ft. on the Alabama, and none on the Wichita, and the lowest total receipts of 156,43 on the Monongahela.

JOHN F. PRESTON.

Washington Notes

Captain Arthur C. Ringland, recently returned from Czecho-Slovakia, paid a call to the Washington Office this week. Captain Ringland is exceedingly modest in regard to his efforts in the relief work in Czecho-Slovakia, but it is a well-known fact that he made a name for himself and earned the praise of all with whom he came in contact by the efficient manner in which he met a difficult situation.

Mr. C. W. Boyce has arrived in Washington to take up the economic studies of the paper industry formerly conducted by Mr. Haas.

Our Letter Box

Reference is made to the comparison of Forests on pages 5 and 6 of the Washington Bulletin of August 2.

Since the figures in the tabulation are from the 1921 allotment sheets, I imagine that the various Forests concerned would have preferred seeing just what business was handled for the year ending June 30, 1920.

For instance, the total net receipts on the Coconino for 1920 were $161,863.22.

The gross area of the Forest after the addition of the Verde Strip, September 29, 1919, was 1,919,336 acres.

Under timber sales 29,624 M ft. B. M. of Government timber was cut in 1920 and in addition 15,315 M ft. B. M. of State timber worth $50,057.97 and 834 M ft. B. M. of private timber worth $1,501.49 was handled by our force under cooperative agreement, a total of 45,773 M ft. B. M. While the State receipts are not credited to the Coconino, of course, the amount of timber handled should be considered when comparing the volume of business handled. The annual cut on the Coconino ranges from 40 to 60 million feet B.M. Some years a big per cent of the timber cut is timber rights and State timber but we should be given credit for transacting the business.

E. G. MILLER.

Forest Products Laboratory Notes

Charring is of little value in protecting the butts of fence posts and telephone poles from decay. This is shown by service tests made by the U.S. Forest Products Laboratory on fences of charred and untreated posts of various species. The charred posts proved in these tests to be even less durable than the untreated ones.

Theoretically, an area of charred wood around a post should prevent decay, because charcoal does not decay or encourage the growth of fungi. But the charred area around a post is not usually a solid covering. It is checked through in many places. If posts are seasoned before they are charred, the charring does not reach to the bottom of the season checks which are always present. If green unchecked posts are charred, checks will open through the charred part as the wood seasons. In either case the uncharred center of the post is exposed to fungus infection and will decay as rapidly as any untreated wood.

Charring deep enough to resist decay would undoubtedly weaken a post of ordinary size.

Forest Products Laboratory Notes (Cont.)

During his recent trip to Valdosta, Georgia, Dr. Hawley was asked to address the Rotary Club. He told as much about the laboratory as he could in the time allotted him and when he had finished the Chairman said that some one had sent up a question to ask him. The question read as follows: "How can you take the wood out of wood alcohol?"

District 1 - Northern District

Mr. D. F. McGowan, who has been Assistant to the Solicitor in this District since 1913, assumed charge of Lands October 1. Mr. McGowan's splendid legal training and long experience in handling legislative problems made his transfer to this department particularly opportune in view of the importance of the land exchange problems with which the Service is confronted at this time.

Mr. H. H. Clark, who succeeds Mr. McGowan as Assistant to the Solicitor, was Assistant in the Office of Law in this District from 1910 to 1914, when he was transferred to the Forest Service section of the Solicitor's office in Washington. Mr. Clark is thoroughly familiar with the work in its broader phases as he has been detailed to the various districts from time to time, relieving the field Assistants during their vacations or other details. The Forest Service welcomes Mr. and Mrs. Clark back to Missoula.

Mr. Elers Koch, assigned to fire protection work in Operation for the last year and a half, has been promoted to Assistant District Forester in charge of Forest Management. Mr. Koch's long experience as Supervisor, supplemented by his intensive fire studies, gives him an intimate knowledge of the Forestry problems of this District which will be particularly valuable in the new assignment.,

Mr. G. H. Lautz, who has been in this District nine years, during which time he has risen from the position of topographic-draftsman to District Engineer, will be transferred to the Washington office as Assistant Engineer, effective November 1. Mr. Lautz has attained the top rung of the engineering ladder in this District and welcomes the added responsibilities and broader field offered by the Washington office. Mr. Lautz has always "hitched his wagon to a star" and all his associates hope the star may prove the brightest in the constellation.

Messrs. J. M. Jughes and J. H. Cook, land agents for the Northern Pacific Railroad Company, recently called at the District Office to discuss Forest Policy matters and the railroad tie problem. They stated that the Northern Pacific was disposing of its timber land wherever sales could be made at what they considered a reasonable figure because of the mounting cost of taxes in Idaho, which in the past few years had been increased by more than 100 per cent on land which is now worth no more than it was ten years ago. Mr. Hughes expressed himself as favoring acquisition of forest land by the Government through purchase but felt that the outlook for such action in the immediate future on a scale large enough to meet the situation was not very encouraging.

A general study of the problem of brush disposal has been undertaken for the District. It is the purpose to study brush disposal methods for all our forest types, but at present the work is centered on the handling of brush left after logging in the white pine type.

Mr. J. A. Larsen and W. C. Loudermilk are going the rounds on the Kaniksu, Pend Oreille and Coeur d'Alene Forests, digging up records of old sales, and making examinations of cut-over areas where different methods of disposal have been employed. The field men are interviewed as to the methods on their particular sales which they have found to give the best results. The investigators report that the work is going ahead satisfactorily. They are finding that those who are practicing the woods end of forestry are keenly alive to their particular problems, and are furnishing an indispensable contribution to the study.

Some very creditable work is being done in brush disposal, and much of it is back in the woods off the roads. It is a pity that some of these areas cannot be transferred to the State Fair to show our fellow citizens what is actually being done now in the practice of silviculture. In the not far distant future, we hope to have examples of good silviculture along our public highways and possibly demonstration areas placarded which will inform the passerby what is being done with the forest land.

District 1 - Northern District (Cont.)

The Forest Service will give expert advice in the form of a marking plan and will handle brush disposal on State sales.

An agreement is pending with the State of Idaho under which the Forest Service, through the Cooperative Work Fund, will take over the brush disposal (piling and burning) of the State of Idaho lands on Big Creek on the Kaniksu National Forest where approximately two million feet of timber have recently been purchased by the Diamond Match Company for $750,000.

The officials of Idaho are very much alive to the necessity of keeping up the productivity of the State's forest lands. The method of piling and burning the brush was preferred to the usual indiscriminate broad-cast burning in order to save the seed trees which are left as well as to protect the new generation of trees whether already started or coming from seed in the duff.

The case of the United States v. the Great Northern Railway Company for fire damage, which resulted to the Flathead National Forest, and the Glacier National Park during 1917 was successfully terminated in favor of the United States on September 11, 1920, when the jury in the federal court at Great Falls, Montana, brought in a verdict in favor of the United States in the sum of $7,413.87 and costs, making a total of $8,502.23. The case was tried before Judge Bourquin, beginning September 7. Numerous witnesses were called on behalf of the United States and on behalf of the Railroad Company. The fire started on the Great Northern right of way and burned to the Flathead National Forest and the Glacier National Park. It is pleasing to note that the jury must have given favorable consideration to the testimony of Messrs. Swartz and Girard in connection with the value of the timber damaged, inasmuch as the Railway Company had three timber cruisers as witnesses who testified, in substance, that the timber had no commercial value.

District 4 - Intermountain District

Bulletin 1165, "Laws Relating to Fur Bearing Animals" shows that Colorado, Wyoming and Arizona pay no bounties whatever on predatory animals. Nevada pays only $5.00 for lions, $2.00 each for lynx and bobcats besides 75¢ which the State Livestock Association pays for coyotes, bobcats and lynx. Idaho pays only $2.50 on coyotes, lynx and bobcats, $20.00 on bear and wolf, and $60.00 on mountain lion. Utah pays $62.50 bounty on wolves, $30.00 on bear, cougar, and lion, $4.00 on coyotes, $3.00 on lynx and bobcats. It is just possible that because of the higher bounties paid in Utah bounty records show so many predatory animals destroyed in this State. In 1912 a Jewish hide buyer with headquarters at Montpelier, Idaho, was met between Paris and Fish Haven, Idaho, as he was returning from Randolph where he claimed to have secured bounty on a number of coyotes, the hides of which he had in his wagon. At that time Idaho paid a very small bounty on coyotes so that according to the hide buyer every coyote killed 100 miles of Utah was brought into this State for the bounty. --Manti.

A very good meeting was held with the Paradise Cattle Association on October 10. Even though the closed area on the Santa Rosa division has caused the permittees considerable extra work, it is believed that they are all practically in accord with the system at this time. They all recognize that a great deal of valuable progress has been made. It is believed that this spirit of general accord has been accomplished through the fact that the Forest Service really stuck to the points at which we aimed in the first place. One of our most troublesome permittees on the west side of the Mountain stated that the reproduction of grass and trees on the areas where cloudbursts had done a great deal of damage was unbelievable. He, in fact, at the present time is a thorough believer in the closed area and what it can accomplish. Statements were made by other permittees along the same line; that is, that streams which have their source on the closed areas, in numerous cases, are running later in the season and farther out on the desert lands in the foothills. It is a fact that where a few years ago we had only barren land, now we have aspen trees which are from two to four feet high. On areas where soil does not support aspen growth, usually some shrubs, weeds or grasses are making a start.

Humboldt.

District 4 - Intermountain District (Cont.)

Those Paper Clothes

Secretary Burr of the National Association of Box Manufacturers says:

"Rather than wear wood pulp B. V. D.'s, a wall paper shirt with cardboard front, a Chicago American vest and kraft Prince Albert, I shall imbibe a wood alcohol sundae and go to meet my Puritan ancestors in a wooden kimona."
AMERICAN LUMBERMAN.

Splendid Fire Record on Two of Nevada Forests

In some respects the fire reports submitted by two of the Nevada Forests are hard to equal. The Nevada Forest had four fires during the past season, two of which were caused by lightning and two were man-made. The persons responsible for the starting of the two man-made fires were both successfully brought to justice. The Toiyabe had only one fire during the season which was caused by a sheep herder who was prosecuted and paid the penalty.

Mr. Griffin of a Los Angeles Moving picture concern accompanied Mr. Parkinson on his recent trip to District No. 6. He is endeavoring to locate a suitable site for the taking of winter scenes for a northern story. He states that when a suitable location is found, they expect to move in their entire company for about six weeks to two months. This company includes a pack of sixty dogs and a number of bears. -- Wasatch News Letter.

District 5 - California District

How Many Trees Grow on an Acre Fully Stocked at Maturity? Studies on the Plumas show 39 in the yellow pine type, 47 in the sugar pine-yellow pine type, 58 in the generally mixed coniferous type with five species; 80 in the sugar pine-fir type and 110 in the red fir type. Apparently, the number of trees of any one species in a stand is a fairly good index of its tolerance - the greater the number, the greater its tolerance. In the meantime, the per cent in the various crown classes remainsthe same for all types. (RS)

Some Storm! The storm of October 6 was so terrific on Mount Eddy Lookout that the wind reached a velocity of sixty-two miles an hour, and the force of the wind broke all the window panes on one side of the Lookout house. It was snowing at the time, and at least two feet of snow was blown in the building. The wind was so hard that the Lookout man was unable to get outside to hang up the shutters on the windows for protection. This happened in the night, and in order to keep dry he had to put his blankets under the platform in the center of the room on which the table and map stand, and crawl in there for the night. The next day a man was sent up to bring him down. The wind bent the flag pole, which is made of pipe, to a forty-five degree angle.

He Wore It Off. A few nights ago, in a cow camp, one of the stockmen who found difficulty in shuffling the cards through having had the misfortune of losing his index finger related how it came about.

An inquisitive female tourist last summer having asked him more than the allotted number of questions relative to where the trails led finally noticing the absence of his finger asked: "My dear man, how did you lose your finger?" His reply was "Pointing out these trails to tourists, ma'am."

The "Rangerettes." Reports from the field indicate that a great deal of interest is being taken in the coming ranger examination by would-be "rangerettes." All this is due to the statement in the announcement that women will be admitted to the examination. We have not yet learned who is responsible for this, but we do know that there is not any intention of lightening the ranger's job, nor of creating new positions, for the benefit of the gentler sex. Since women cannot perform the duties ordinarily required of rangers it is not likely that any such appointments will be made.

Rain and Other Things. It is commonly believed that the precipitation increases with elevation. It does - up to a certain point; than it falls off. The following precipitation data taken along the line of the Southern Pacific crossing the Sierras shows this. Oakland has an elevation of 36 feet, and a rainfall of 24.30 inches annually. Sacramento with twice the elevation gets but three-fourths of the rain while Rocklin, with seven times the elevation, 249 feet, has a rainfall one-fifth greater than Oakland. Colfax, with an elevation of 2421 feet has 2¼ times the precipitation as Oakland; Towle, elevation 3612 feet, has 2½ times that of Oakland; and Blue Canyon, elevation 4695, has more than three times the Oakland precipitation. But higher up the slope, Emigrant Gap and Cisco with elevations of 5230 and 5939 feet, have the same precipitation as Towle, and Summit at 7017 feet has almost the same as Colfax and only two-thirds that of Blue Canyon. Truckee, on the east slope with an elevation of 5820, gets the same precipitation as Rocklin; Boca at 5531 gets the same as Sacramento; and Reno at 4484 feet, almost the same as Blue Canyon, gets about one-third the rain of Oakland and less than half that received by Sacramento. (RS)

District 6 - North Pacific District

Irvin S. Cobb says that his recent hunting trip in central Oregon and on the Deschutes Forest has fulfilled his idea of a good time. He was visibly impressed by the beauty of this lake, mountain, and forest region, and particularly by Crater Lake. Mr. Cobb began his fishing at Davis Lake, continued it at Odell Lake, and quickly caught the limit at Crater, East, and Paulina lakes. Cougar and bear had made deer scarce, but at Odell Lake he bagged one of the latter. He tried hard but unsuccessfully for the lava bear,- peculiar to central Oregon and so rare there that many believe it a myth; the only specimen known to exist having been killed a few years ago by a sheep herder in central Oregon and is now in the National Museum in Washington. However, Mr. Cobb bagged ordinary bear, and helped toward exterminating the jack rabbits of central Oregon. In this connection Lewis H. Moomaw, of the American Lifeograph Company, who accompanied the party, says that there's nothing the matter with Cobb's shooting, but added that whenever those in the back of the car got ahead, Norman G. Jacobson, former supervisor of the Deschutes, who was driving the automobile, would speed up to frighten away the rabbits.

Mr. Cobb proved an agreeable companion. He called Jacobson's Airedale a "shade hound," because of its inclination to lie in the shade; it would hop off the machine when it saw shade, necessitating constant returns for it. On the Warm Springs Indian Reservation Mr. Cobb, who went after the hound, found him lying in the shade of a fat Indian.

Recent inspections of the planting on the Cispus burn, on the Rainier, showed that almost all the young seedlings on a part of the planting area had been eaten off, supposedly by rock conies. This instance, if authentic, is the first known here of trees being damaged by conies, although they have frequently been eaten by mountain beaver and grouse.

As a result of the visit of A. Helm, Australian forester, in this District, seeds of Douglas fir, Sitka spruce, and western yellow pine are to be sent to Australia from Oregon for experimental planting. In Denmark Mr. Helm observed the splendid growth of 30-year-old Douglas firs had made from Pacific Northwest seeds, and is hopeful that Douglas fir and other Northwest species, may succeed in Australia. While here Mr. Helm accompanied Forest Examiner J. F. Kummel to the Solduc and Cispus burns, Olympic and Rainier Forests. On the former 85% of the trees planted in the spring of 1919 were found to be thriving. The Cispus reforestation did not make so good a showing, owing to a summer drought. Mr. Helm, who says that in the other countries he has visited dead wood and brush are cleared from land before planting is begun, showed much interest in planting done in the midst of such debris. He is in doubt as to which method he will recommend for Australia.

Preliminary survey of the proposed Oregon Skyline Road along the summit of the Cascades, from Mount Hood to Crater Lake, has been completed by Fred W. Cleator, L. R. Johnson, and F. B. Lenzie, of the Forest Service, and a cooperating party from the Bureau of Public Roads. This preliminary trail survey is to be followed by eventual construction of a road along the crest of the Cascades which, when completed, will be one of the show places of the entire West. Mr. Cleator says that the survey was not extremely difficult, although detours had to be made in many places. Several hundred "Oregon Skyline Trail" signs were posted along the route. Many vacation parties were found near the numerous lakes of the region. Sixteen of these lakes,--varying in area from 8 acres to 90 acres, but as yet unnamed,--were replenished by 60,000 trout fry which the Forest Service party had carried up for the purpose.

The third 5-year measurement on a Douglas fir sample area, Cascade Forest, Oregon, made recently by Forest Examiner Munger, showed a growth since 1915 of 1,044 board feet per acre; 10,216 cubic feet as gross average scale per acre, and 47,899 board feet as gross volume of merchantable timber per acre. The trees are 64 years old, in three 1-acre plots. The living trees average 155 per acre, 41 less than 10 years ago, smaller trees having been crowded out. The trees have an average diameter of 16.3 inches, ranging from 4 to 27 inches. This forest may be said to be typical of thousands of acres of logged-of country in Oregon and Washington, which should be growing 1,000 board feet annually.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for publication)

November 1, 1920.

The Outlook for Salary Reclassification

The report made by the Joint Commission on Reclassification last February was referred to the House Committee on Reform in the Civil Service and to the Senate Committee on Appropriations. Neither of these committees has yet taken any action. During the recess of Congress the Federal Employees' Union has been very active both in the discussion and the dissemination of the Reclassification Commission's report, and also in its efforts to interest members of Congress in the report and to secure action for its adoption either in whole or in substance. There is in session in Washington every week a reclassification committee consisting of a number of representatives of the different Bureaus who did the lion's share of the detail work in making up the reclassification schedule, together with officials of the Federal Employees' Union, and through these weekly meetings it has been possible to keep in touch with the progress of what the Federal Employees' Union is doing.

During the summer the Union employed two personnel experts, Mr. Moses and Mr. Lambie. Mr. Moses has had a great deal to do with working out questions in the handling of personnel in the municipal government of New York City. These two men were employed to go over the Reclassification Commission's report from the standpoint of impartial experts and criticise it, which they have done and a brief critique prepared by them has been made public. Subsequently, through the efforts of the Federal Employees' Union, Mr. Lehlbach, the chairman of the House Committee on Reform in the Civil Service, agreed informally that he would have some definite measure to propose to Congress along the lines of the reclassification report (or the reclassification report as he thought it ought to be modified) at the beginning of the session, and through an arrangement made by the Union the services of Mr. Moses have been made available to Chairman Lehlbach for the purpose of working up a bill which the Committee presumably will introduce when Congress convenes. Mr. Lewis Merriam, of the Institute of Technical Research, who is also an expert on personnel and public organization, is associated with Mr. Moses in this work.

There are two ideas apparently that are guiding in the preparation of the bill. First, to simplify considerably the classification codes of the Joint Commission, and to reduce the number of pages of description of different positions from over one thousand to possibly half a dozen pages of a simple and flexible classification that can be put into law, with salary schedules corresponding to the different grades, into which the executive officers can fit each group of employees in its proper place. The second idea that is expected to be embodied in the bill is that the responsibility for the classification will be placed in the hands of the proposed Budget Bureau instead of in the hands of the Civil Service Commission. The preliminary report made by Mr. Moses has placed a great deal of emphasis on the fact that the control should be primarily fiscal. He thinks that the Civil Service Commission should continue to function as the employment agency of the Government, and that the control of salary adjustments as between different Bureaus and branches of the Government after the employee enters the public service should be a "budgetary control," to use his term; that is, that it should rest with the central agency of the Government that will make up the budget which it is anticipated will be put into effect as one of the first measures that Congress will take up. If Mr. Moses' ideas, as they have been expressed, are carried out, the control of the classification of salaries and the administration of the personnel policy of the Government, aside from getting properly qualified people into the Government service, which remains with the Civil Service Commission, will be vested in the Budget Bureau. There seems to be a desire on the part of Mr. Lehlbach to press for action at this session on some bill which will give substantial relief in salaries and will carry out the essential principles of the scheme of reclassification, but which will be a much shorter and simpler measure than that proposed by the Joint Commission.

The situation is complicated by the fact that the Bureau of Efficiency, in compliance with old instructions from Congress, is also going to submit a report covering the same ground. The report presumably will go to the same committees of the House and Senate. A further possible complication in the situation is that the United States Civil Service Reform League, which was largely responsible for the enactment of our original civil service law in 1883 and which has been giving a great deal of effort and attention to civil-service reform in various municipalities and states, is likely to get into the situation with a bill of its own, and its measure will probably seek to largely extend the classified civil service. In other words, they are going to use this opportunity to take another crack at the spoils system.

The Outlook for Salary Reclassification (Cont.)

The great danger in the situation is that there will be so many cooks stirring the broth that the soup will be spoiled, so many recommendations made to Congress and so much disagreement between the different recommendations that it will give Congress an excellent opportunity to drop the whole question or to go through the session without really initiating any suitable legislation. That is a very serious danger.

There is also danger that if action is not secured at this session no general action can be secured for some time to come. The peak of high prices has apparently been passed, all of the indices showing declines now from month to month, and the large and serious argument for a revision of the general scale of Federal salaries is likely to become a matter of history rather than an acute situation of the present.

An effort is being made through the Federal Club to get the members of that club and the people that can be reached through it into agreement upon something that is reasonably good, and, instead of having the representatives of thirty different bureaus go before these committees and give conflicting recommendations and testimony, to get them if possible to recommend substantially the same thing, iron out our own differences, and reach an agreement among ourselves on essential things, so that the recommendations of the Federal executives and the employees in the higher technical and scientific grades will be harmonious. This is going to be extremely difficult to do, and I am not at all optimistic as to just what will come out of it because there are so many diverse opinions.

In the meantime, Secretary Meredith has taken a very positive and satisfying stand as to his own recommendations for salaries in the Department of Agriculture. The estimates submitted by the Forest Service dealing with our new statutory roll and with the new item covering the salaries of Supervisors, Deputy Supervisors, and Rangers, have been approved practically as we submitted them. As far as Secretary Meredith's own recommendations are concerned, we will go before Congress with a salary schedule that will put the bulk of the Forest Service employees fairly close to what the Reclassification Commission recommended. It is understood that this will be done largely throughout the Department.

The Secretary has also recommended that the present limitation on lump-sum salaries in the Department, which is $4,500 per annum, be advanced to $6,500, which would break the jam which we have now reached in the adjustment of our lump-sum salaries. In other words, with a $6,500 maximum we could, as far as the money goes, adjust salaries all through the Service on the lump-sum rolls so as to carry out substantially the recommendations of the Reclassification Commission, which has been our goal. The Secretary has also recommended an increase in the fixed per diem in lieu of subsistence of from $4 to $6, and an increase in the maximum amount payable under actual subsistence expenses per day from $5 to $7.

It is also interesting to know that the Secretary will request authority to appoint a director of scientific work and a director of regulatory work, who would serve, to all intents and purposes, as Assistant Secretaries of Agriculture. It is presumed that the purpose of these two officers will be to correlate, one the scientific work and the other the regulatory work of the Department.

I believe that Congress is rather favorable to a general increase in salaries. I am dubious of the success of the reclassification measure, although it may be possible to get action on it, but I am much more optimistic about obtaining increases in our appropriations.

W. B. GREELEY.

What's In a Name?

We endorse the protests made against the proposed changes in titles, and submit that the title "Ranger" is now as fully descriptive of the duties, activities and position as it ever was and, moreover, the title has become so closely identified with the position both within and outside the Service, that it would be very unwise to attempt the change.

We question the statement which has been made to the effect that possibly the compelling force attached to the title "Forest Ranger" is on account of the traditions and fame of the Texas Rangers. We submit the following Funk and Wagnalls dictionary definition of "ranger" not only as proof that the title has become firmly established, but as proof that the Forest Ranger has built up his own traditions and that his fame is based upon those traditions.

What's in A Name? (Cont.)

> "Ranger - One of an armed band usually mounted, designed to protect large tracts of country; In England an official in charge of a royal forest. In America a warden employed in patrolling forest tracts more particularly those belonging to a State."

The Texas Rangers, while entitled to much credit and fame for the traditions they have built up around their organization, are not specifically mentioned in this standard dictionary definition, while the Forest Ranger of both England and America is so distinguished.

"Aid" in the sense it is proposed to be used in the new title is, no doubt, suggested by the title "Aide-de-camp," a military title attached to a military position or office synonymous with "confidential messenger."

The Forest Ranger who by his work, activity and loyalty put the definition of "ranger" into the dictionaries certainly had a different conception of his position and did not look upon his duties or the performance of them as those of a messenger receiving and carrying out arbitrary orders. His was a different position and duty. He was required, at least he did, use his own head as well, and it is largely through his own initiative and individuality that he has traditions and fame. It is true that he possessed the versatility of a modern phonograph in that he played all makes of records, but he also recorded and made his own records and played them, effectively too.

Is it necessary, in order that he receive a just compensation, that the traditions and fame and record for efficiency and loyalty that he has made and built up for himself and the Service, be hidden under a title which means nothing to him or the Service, past, present, or future? Regardless of what he may be called in the future the old "Forest Ranger" will still be a "Forest Ranger" to himself, the public and the Service,- then why call him something else?

"Forest Aid" - O-h g-i-r-l-s ain't that too cute and sweet for anything -- tee hee.

Teton News Letter.

Embryo Stockmen Study Our Grazing Methods

Recently the livestock class of students from the New Mexico Agricultural College at Mesilla Park, N. M., visited the Jornada Range Reserve for the purpose of informing themselves as to the many studies on the grazing of cattle under range conditions that are now being carried on there. They visited every part of the 250,000-acre tract, and also several ranges on the adjacent public domain, which gave them an opportunity to study our methods as compared with those in common use on the southwestern ranges.

Mr. Nelson, the Grazing Examiner in charge of the Jornada Reserve, accompanied them, and explained carefully the relative merits of the different grazing systems, the results of breeding up inferior grades of cattle, the selection of the best females for building up the herd, and the carrying of a certain proportion of the herd as steers which can be marketed in the event that adverse weather conditions make it necessary to reduce the number of stock using the range. The students were also shown the relative importance of the various forage plants found in that region. The revegetation studies now being carried on, together with the rotation system, were also outlined to them. One of the points in which they were especially interested was the supplemental feeding carried on on the Reserve during the winter, especially the use of soapweed as an emergency feed.

The value of such a visit to these young men, who are going through a course in the College with a view to making themselves practical, up-to-date farmers and stockmen, cannot be overestimated. The information which has already been obtained on the Jornada as to improvements in the method of handling stock on the public domain shows many instances in which range stockmen can increase their calf crop, save their herds from losses due to starvation and poisonous plants, and meet drouth and other climatic conditions in a much more satisfactory way than they are at present. There is no better way of getting these results before the stockmen and into practical use than through such methods. One wonders if visits by classes of this kind in other parts of the range states, where the colleges are reasonably close to one of our National Forests upon which we are handling the stock under improved methods, would not well repay the students. The cost would not be much, and undoubtedly a class of wide-awake young fellows spending a week or ten days' time on one of our good grazing Forests would not only have an excellent outing, but would secure a mass of information which would be of vast value to them in their studies and future business lives.

WILL C. BARNES.

Boats for the Alaskan Fleet

We are in a fair way to increase our Alaska fleet by two boats. These are the Panama, 78 gross tons, and the Ora, 33 gross tons, both built in 1914 and costing $24,000 and $5,500 respectively. They are surplus boats from the Navy and are being transferred to the Forest Service under the Executive Order authorizing the transfer of surplus equipment. The last two boats secured were transported by the Navy Department to Puget Sound on a collier without expense to the Forest Service except the necessary cradling. It was hoped that the transportation of the Panama and the Ora could be effected in the same way, but there is some difficulty about this, since the boats are now at Key West, where there are no loading facilities and no naval colliers will be available until next May. We are now in touch with the Shipping Board, which may be able to make arrangements with some commercial line. The difficulty here is in getting the boats from Key West to some port of call for commercial boats where there are loading facilities. The boat problem in Alaska is a serious one and there is apparently nothing to do but go after a larger fleet. The boats are expensive to keep in condition but are absolutely essential. The Service has probably spent enough money in charters to pay for several boats. It is impossible to carry on power and timber reconnaissance, push timber sales, and keep up the regular work of the Rangers without more boats, and a program for an "enlarged navy" is necessary.

P. D. KELLETER.

Signs of the Times

"It will richly pay all Forest Officers to read and consider the discussions which have been running for some time in the Weekly Bulletin of the Washington Office on organization and efficiency and apply what appears best in them to his own work. It is the handwriting on the wall. It presages the time when every man from Forester down, who does not put the best of his thoughts, his enthusiasm, and his energy into getting broad-scale results, will eliminate himself from a position of responsibility. On this Forest, because of a threatened necessary reduction in force, our problem during the past three months has not been as in the past three or four years, to find any kind of a passable man for a certain place or station, but to determine who among the force are getting the best results, and who by their attitude of mind and potentialities give the most promise of future valuable service. I believe we are for the first time in the history of the Service at the point where the man in every permanent position will be progressive, a constructive worker, not merely a hanger on whose work must be passed out to him in each specific detail and then be frequently punched up to get it done. Some men can't see work on a 400,000-acre district and others find more than they can do on a couple of townships. It's a case of looking ahead now, or from the side lines later."

F.E.A. Santa Fe News Bulletin.

Standard Building Plans

It seems certain that standardized building plans can be designed for at least a part of our buildings such as garages, woodhouses, work shops, chicken coops, etc., and perhaps also for dwellings with different methods of finishing interiors in warm and cold climates. With the present distribution of the so-called ready-cut house concerns, a saving might be made in ordering all buildings from some such concern having well distributed mills. The State Forester of Michigan now has all buildings standardized and when a new State Forest is opened up, simply orders buildings 6, 7 and 9 as required from one of the ready-cut concerns.

H. C. HILTON.

Publicity and Its Reaction

I suppose all Forest Service members recall some of the long-winded special fire signs used in the past in a well-meant attempt for publicity of Forest protection.

One of these special signs worded "You are part owner of the Forests. Help protect them from fire," etc., was posted on the Greybull District of the Shoshone Forest in the past and had weathered both the storms and the change in personnel on that district.

In 1919 when the sheep were hitting the driveway, Ranger Snyder rode onto a camp fire left burning by a careless sheep herder. He immediately trailed the offender, stopping him by chance opposite the posted sign

Publicity and Its Reaction (Continued)

mentioned and jumped him about leaving his fire without putting it out, explaining the danger and chance of its scattering and burning up part of the forest.

The herder called Merrill's attention to the fire sign and asked, "You see that sign over there? Well, aint I part owner of this forest?" "I guess you are," said Merrill. "Well, what's it to you, then, if I burn up my portion?" returned the herder.

Anyone who knows Merrill can recall his easy-going smile, but the herder went back and put his camp fire out.

Does publicity pay?

Hulse-Shoshone.

This leaves ye Editor so stupified that he is unable to comment - but watch next year's fire signs!

D-2 Bulletin.

Training the Protective Force

In training the protective force, there is no set of rules that can be followed. In the Fire Organization, there is, roughly, the old-timer and the young man with more or less technical education. The old-timer does not hanker for theory nor does he take kindly to any new or radical change in his way of doing things and has the attitude of a Missourian. On the other hand, the young man is looking for the practical, knowing that theory can not be used alone. The ranger force falls into one of these classes and the ranger's attitude is clearly reflected in his guard force. Therefore, he must be the principal target to shoot at.

In this organization, as in any other, the push has to come from the top down and there should be a decided feeling on the ranger's part that the top man has been through the mill and accomplished the things he is trying to put over.

The plan followed this past season was to write two sets of general instructions, one to be used by the Ranger and Smokechaser, and the other by the rangers and lookouts. These instructions cover the following points:

I. Ranger and Smokechaser
  (1) Equipment and supplies.
  (2) Headquarters duties.
  (3) Progress to the fire.
  (4) Location of fire by smokechaser.
  (5) Work on fire.
  (6) (a) Small fires. No help required.
      (b) Small fire. Help required.
      (c) Large fire beyond control of one man.
  (6) Safety first.
II. Rangers and Lookouts.
  (1) Equipment and use.
  (2) The Base Board.
  (3) The Map Board.
  (4) The Alidade.
  (5) Headquarters Routine.
  (6) Fire Location and Reports.
  (7) Determining Distance.
  (8) Description of Land Marks.
  (9) Action of Lookout upon Discovery of Fire.
  (10) Rangers' Instruction.
  (11) Quarters and Sanitation.
  (12) Action of Ranger upon Receipt of Report.

These general instructions were supplemented by written instruction from the Ranger, covering in more detail all duties of the guards. At the beginning of the season, the Ranger and his guards were given group instruction by the Supervisor or Fire Assistant. This covered in a general way the "why and what" of the Forest Service and its aims, fire statistics, duties of each individual, and ways and means of detecting and controlling fires. At these meetings, it was the aim to get the men on their toes and show them that the success of the whole game depended upon them. Questions and talks by the guards were encouraged to bring out their ideas and correct wrong impressions. Besides this, the rangers were required to talk over the instructions with their men to see that they were thoroughly understood. The chapters of the

Training the Protective Force (Continued)

"Western Fire Fighter's Manual" dealing with lookouts and fire fighting were furnished to each guard some time during the early part of the season.

In order to check up the organization, the Fire Assistant went to each ranger district early in the spring to inspect equipment and talk over fire plans with the Ranger. As soon as the guards were placed at their stations, the Fire Assistant visited each man to see that he understood his job and if instructions were being carried out. The Fire Assistant or the Supervisor visited as many fires as possible during the season.

I believe that this season shows that in the past, too little personal instruction and inspection have been given. The Ranger has been expected to carry more than his share of the fire organization; the good and weak points in the Ranger's plan have not been sifted out and passed on to other members of the force; and the overhead man has failed to recognize that that which may seem small to him is a large matter to the Ranger. No set of hard and fast rules can be written, but the personal equation of each individual must be taken into consideration in striving to make all roads lead to Rome.

J. K. DIVINELLE
Kootenai National Forest.

Imitation is the Sincerest Form of Flattery

The Branch of Grazing has lately been securing from the various Districts information relative to the value of grazing upon private lands as compared with that on the Forest ranges. The District Foresters in furnishing this information have sent in copies of contracts entered into between the owners of various tracts of private land and the stockmen. The interesting point in a number of them is the following paragraph, which is inserted as part of the contract:

> "The customary regulations as regards overstocking and overfeeding which are used and enforced by the United States Government in its sheep-grazing permits on Forest Reserves in the vicinity of lands herein described shall be accepted as the regulations to be followed in this lease."

W. C. B.

Washington Notes

Mr. Ashe and Mr. Fletcher have recently returned from a trip to northeastern Pennsylvania and southwestern New York, where they examined an area of approximately a million acres of land to ascertain if it is suitable for a purchase area under the Weeks Law. Mr. Ashe is favorable to the proposition. Part of the area contains a very high type of industries with forestry as a basis and is quite valuable, being heavily wooded and well managed and protected, and part of it is in a poor state of protection. He thinks that the Government could in the course of five years acquire 200,000 acres out of the million or so at an average cost of between $4 and $6 an acre. Much of the better land is carried at a higher figure than this because of its productiveness and the fact that successive changes of ownership have inflated values. There is a nucleus of land that is purchaseable at a very reasonable figure, and it is probable that the establishment of a purchase area will be recommended to the National Forest Reservation Commission.

Miss Mary Kirk Simpson, of the Branch of Research, on October 28, 1920, received the degree of Master of Arts at the Fall Convocation of The George Washington University. The course of study pursued was French, Spanish, and Ethnology, and the study in connection with this work was done after office hours. Miss Simpson has been a member of the Forest Service for twelve years.

Mr. R. C. Staebner has been appointed Forest Inspector in the Branch of Forest Management. Mr. Staebner is a graduate of the Harvard Forest School and was connected with the Forest Service from 1912 to 1913, during which time he made exhaustive analyses of logging costs. On September 1, 1913, he entered the employ of the Little River Lumber Company at Townsend, Tennessee, and, with exception of two years spent with the Twentieth Engineers in France, has been with that company up to the present time. He has had a wide experience in logging and is exceptionally well fitted for the work he will undertake in the Forest Service.

Forest Products Laboratory Notes

Mr. J. B. Shaw, of Melbourne, Australia, has been visiting the Laboratory to obtain information in regard to Water Spray Kilns which his company is planning to build in Tasmania for drying native hardwoods (eucalyptus). There are already several of these kilns in southern Australia. It may truly be said that "THE SUN NEVER SETS" on the Forest Service Water Spray Kiln. At any rate, summer never leaves it. In southern Australia, they are just beginning their summer season; in South Africa summer is well advanced; in India they are in the midst of summer; in Borneo it is summer all the time, and in Mexico things are generally hot; but in the U. S. summer is departing, and at Madison -- -- you can judge for yourself. In Europe and South America no Forest Service kilns have yet been built.

District 1 - Northern District

According to the Chamber of Commerce report nearly 30,000 tourists passed through Missoula this season. They came from all parts of the United States. This record has a message in it. It means to Engineering, a demand for more and better roads and trails; to Operation it shows the need for more improvements of all kinds; it indicates to Lands the need for a complete and thorough policy and plan for developing the summer home sites and other recreation grounds; to the Office of Fire Prevention it means possibly more hazards, and certainly more opportunities to spread the gospel of fire prevention.

These 30,000 tourists multiplied four or five times in the next few years, will have established a direct personal interest in the National Forests, an interest that will ever be on the increase. To the entire Service the message reads, get ready.

Mr. G. C. Cheyne, Deputy Conservator of Forests of Burma, India, has been in the District during the past week making observations on United States Forest Service methods. He says Forest Officers in Burma are each assigned three elephants for use in their official work. Forest officers are also required to practically domesticate and train their own elephants. The June 11th problem in Burma is still a live one, while selection cutting, clean cutting and all forms of cutting in Forestry practices of Burma are referred to as "extraction."

District 2 - Rocky Mountain District

The following heads of Bureaus and Offices of the Department of Agriculture represented in Denver were present at a meeting held in Room 463 New Federal Building on October 18:

Mr. J. S. Bright, Bureau of Public Roads.
Dr. W. E. Howe, Bureau of Animal Industry.
Mr. H. J. Wichmann, Bureau of Chemistry.
Mr. W. F. Heppe, Bureau of Markets.
Mr. L. B. Crawford, Biological Survey.
Mr. A. L. Fellows, Division of Irrigation Investigations.
Mr. A. S. Peck, Forest Service.

At this meeting steps were taken to form an organization of representatives of the Department of Agriculture in Denver for the forwarding of the interests of the Department and our mutual welfare. An association of Department representatives was suggested by Secretary Meredith during his visit to Denver last July and it is felt it will offer a pleasant and sure way of getting acquainted and of cooperating not only for our mutual interest, but to the end of making the Department of Agriculture better and more favorably known in Colorado.

Further steps for the organization of an association have been placed in the hands of a temporary committee appointed for the purpose, consisting of Mr. Fellows, Mr. Heppe and Mr. Peck. This committee announces that the next meeting, at which it is hoped to perfect the organization, will be held in Room 463, New Federal Building on November 5 at 1:30 p.m. At that time it is hoped that representatives from every office in Denver (there are twelve) will be present.

A rather interesting compensation case which recently occurred in this District was that of Joseph Roberts, who was killed on the Harney National Forest. Mr. Roberts was employed on the Limestone Road Project, rate of pay being $3.25 per day and subsistence valued at $1.15 per day. No work was performed on Sunday and the men were not paid for that day, but subsistence was furnished. On Sunday, September 12, the temporary foreman on the project made a general request that some of the men get water for camp use. Four young men, among them Mr. Roberts, volunteered to get the water. One of the boys had a pistol, and when a few feet away from camp drew it from his pocket with the intention of shooting into the air. This pistol discharges very easily and went off as it was pulled from the boy's pocket, shooting Roberts from the rear in the base of the brain. Roberts was rushed to the nearest hospital but died the next morning without regaining consciousness.

There was considerable doubt as to whether Roberts was injured in the performance of official work. It was not a part of his camp duties to get water for camp use, and he was not being paid for Sunday, unless subsistence could be considered as part payment of wages. The man who requested that water be secured was only a temporary foreman in charge during the foreman's absence and did not have official authority to request any of the day laborers to get water.

The Commission has held, however, that the death occurred while in the performance of duty and has indicated that burial expenses are properly chargeable to the Compensation Fund.

The fire situation looks very much relieved, in fact we believe the season is now at an end, due to heavy snows throughout the Rocky Mountain region and fairly heavy rains in Minnesota. Because of the length of the fire season, it was not possible to relieve the lookout at Devil's Head until the week ending October 20.

Messrs. W. I. Hutchinson and Wm. L. Barker have returned to Denver from a two months exhibit tour. The District Forest Service exhibit was this year shown at the Minnesota State Fair, the Colorado State Fair and the International Wheat Show at Wichita, Kansas. A total of more than 215,000 people viewed the display at these three fairs. The recreation resources of the National Forests formed the main setting in all of the exhibit supplemented by a life size camp scene and colored enlargements of scenic attractions within the Forests.

One of the biggest and finest things which has come to the State of Colorado, and for which the wonderful San Isabel National Forest has been chosen as a setting, is now in process of formation. A recuperation camp is now being erected that is to be a god-send to former service men and possibly to others whose state of health makes it imperative for them to live in the out-of-doors. No more wonderful spot could have been chosen and the man responsible for the plan and its development is Lieut. Noel L. Waelchli who was gassed in the battle of the Argonne forest and has just been discharged from the recuperation hospital at Aurora.

The settlement will not be a money-making proposition, but improvements will be added as the need arises. This is the first big sanitarium development on any of the Forests in District Two and is unique in that it is just a kind of a rest camp to build up the patients after they have reached the point where they do not need the constant care of nurses and physicians. One of the most important features of the camp will be a craftshop with power machines for those who want to make reed, raffia and willow trays, piano and floor lamps, baskets and rustic furniture, brass and leather work and the like. A competent craft instructor will be at the service of the guests. A community house with roomy porches and large fireplaces and reading and writing rooms is planned.

The San Isabel Forest was chosen for this recuperation camp principally because of the recreation plan and landscape development work which is planned for that area.

District 3 - Southwestern District

The Reo Speed Wagon, pride of the Coconino, came to grief October 22 in a mix-up with a string of Santa Fe freight cars, at a crossing a mile east of Flagstaff. The cars were moving. So was the Reo. But the latter not quite fast enough, and in the ensuing application of one of the irrefutable laws of physics, the Reo lost most of its rear end, including a number of essential operating parts. Lumberman Rhinehart and Ranger Massey jumped and thereby prevented any fatalities. From what we learn the Railroad was at fault.

On the completion of the office at Gallinas Ranger Station a new flag pole was erected. Ranger Woods writes:

"I raised my flag for the first time September 16. On the same day the public school at Corona opened. It took me most of the morning explaining to the Mexican women and children here at Gallinas that this was a Forest Service office and not a public school. Now the Mexicans are wanting to borrow my flag to use at a Mexican celebration."

Mr. Goddard's idea of filing in Ranger Station files a summary of the users of a district, as regards their attitude towards fire protection, for reference by future rangers, compiled from conversations with them by Forest Officers, I think, is a good idea, and can be elaborated on to include all activities on the Forest, and I left such a general summary in the files of this district, when I was relieved here in 1918, by Ranger Sullivan and he told me it was of material benefit to him, in his work.

If a new ranger had such a record on file, when a permittee applied to him for certain privileges, say a pasture, he could tell whether that permittee would wait until he was allowed this pasture before he started to build it, and when he got a permit, whether he could be trusted to build it on the lines surveyed, without further watching, for I am sorry to say that it is necessary to watch some permittees; the same can apply on all activities on a Forest. Am attaching, herewith, a form which could be used handily for this purpose. If this summary was carefully compiled by a Ranger, well acquainted with the settlers on his district, his successor could tell about what a certain settler would do in any case that would arise.

Ranger Frieborn-Tonto.

A bunch of cattle was thrown on the Forest near Antelope Tank by Messrs. Gage and McLain. The rapidity on Ranger Wingo's part in securing the removal of the stock and settlement for damages totaling around $100.00 we believe holds the record in similar cases. Trespass discovered 1:00 P.M. September 13; help secured and stock counted September 15; trespassers interviewed September 16; stock removed September 16; settlement made September 17.

Lincoln.

Payson, Arizona, is not on the railroad map but it possesses a Chamber of Commerce and the spirit of some of the major league towns. A recent circular issued by this business body tells of the accomplishments and progress in the past month. Among other things, the acquisition of a tourist camp ground consisting of two acres donated by the Forest Service was mentioned as one of the progressive steps forward.

Formal application has been received by Supervisor Arthur from the Mayor of Roswell for a Municipal playground for the City of Roswell located near Pine Lodge on Arroyo Seco Canyon. This is the first application of its kind which has been received in the District and it is believed that a number of other towns will make similar applications if they are informed of the location of suitable areas.

"Twenty-Five words - Twenty-Five Dollars" was the offer recently made in the "Kiwanis Magazine." The words were to be an answer to the question "What would be the first thing you would do if handed a million dollars with no strings to it?" This was the winning answer of nearly two thousand received: "I'd go to Manhattan and stuff a hundred down the throat of the waiter who sneered at my tip when I was only a soldier." The author is S. Omar Barker, of East Las Vegas, New Mexico, formerly ranger on the Carson.

The Texas State fire insurance commission proposes to amend its city key insurance rate schedules to increase from 1 to 3 per cent the credit for teaching fire prevention in the public schools. Fire Marshal Wooldridge believes this concession will act as a sufficient stimulant to induce the cities to educate their school children effectively.

Comment: Why not reduce grazing fees say 5% from standard rates in those states carrying forest fire prevention studies in the courses of the higher grade schools and high schools? Or perhaps add another per cent or two to their present participation in the income from National Forests? It might be cheap fire propaganda in the end.

Late But Extremely Interesting

"Lookout Poncot had a very thrilling adventure on the 10th of August. He had gone down to Wildcat Spring for his daily supply of water and while there was taking a cold shower. His dog "Pete" was roaming around chasing squirrels when he encountered a real nice mountain lion. The lion desired closer acquaintance which resulted in "Pete" bringing him in alive. Poncot was rather startled when the dog came to him with the lion in the close rear. The lion was rather amazed at the sight of a lookout man taking a bath and started to retreat. Poncot managed to get out of the water to his clothes, secured his pop gun and took a shot at "His Royal Highness." Poncot then returned to the lookout and phoned for permission to go hunting. This was granted. He secured the help of Smoke Chaser Sparks, and Frank Jordan with their dogs. The dogs did not show any inclination to take the trail so they wandered over the slopes of Diamond Point until after noon when they found the lion in a tree. They shot him at the same time with a 22 high power and a 30-30. Upon close examination, a small wound was found in the hind leg where Poncot had scored in the morning. Poncot is proud of the two tusks of the cat which no doubt he will have made into a watch charm as a memento of his summer on Diamond Point. (Tonto Bulletin)

A little detective scheme for getting some irrefutable direct evidence on residence requirements is here described. It has also been worked with a shaving of wood, dated and dropped into the fire box of the stove. Deputy Supervisor Kirby of the Crook tells this one:

On May 7, 1920, when passing this claim I wrote the date on a slip of paper and placed it in the stove, under the lid, just back of the fire box, where it probably would not be noticed in case a fire was built in the stove; yet if a fire was built there this slip of paper would be burned.

On September 20, 1920 I again passed this place and found the paper just as I had left it, excepting that there was a mouse's nest over it. I took that paper and placed another one in the stove, bearing the date of 9/20/20.

This should furnish an interesting surprise to spring on him at the time of making final proof. However, it will be necessary to first question him and get him to state that while living there he cooked his meals on the stove. D-3 Bulletin.

In our dealings with the public, I wonder if we do not often fail to clinch our arguments and decisions by failing to explain the wherefore of our position. We explain that so and so would be contrary to the regulations, but sometimes fail to explain the wherefore of the regulations. The regulations can carry moral weight only when they are backed by sound reasons, and only when those reasons are at least roughly understood by the public.
(A.L.) D-3 Bulletin.

Mr. W. L. Bonide, who secured a crossing permit for goats recently, tells an interesting tale: One morning he noticed a considerable reduction in his herd and soon found where a large cut had separated from the rest of the goats. He trailed the cut for a considerable distance and found 291 head grazing quietly in the care of a coyote. Only one animal had been killed by the coyote, but evidently he was trying to beat the HCL by providing his winter food supply. (Prescott)

Flivver "verses" buckboard. What Ranger Cook of the Manzano has to say: "Referring to the use of a team and buckboard in Ranger work perhaps some cost figures would be interesting. My investment is as follows: Two 1100 pound ex-cavalry horses, $150.00, one set double harness, $55.00, one old-ugly, secondhand buckboard or spring-wagon, $20.00; total $225.00. At the expiration of twenty months use of this outfit over rocks, through axle-deep mud and heavy snows, maintenance costs are: Horse-shoeing, done mostly by myself, $30.00, harness repair, $5.00, buckboard repair, $14.00, and one whip, $1.00; total, $50.00. Then add to this 10% interest which the original investment is worth, $37.50 and the total maintenance is $87.50 which amounts spread over the twenty months is $4.37½ per month or $52.50 per year. No depreciation has been charged because it is difficult of computation, but of course in time the whole outfit will have to be replaced. No 'towing in' charges are named because we haven't had any, but, on the contrary, we have successfully extricated some six big and little motor driven vehicles from the mire and set them safely on the solid roads where such vehicles belong." Manzano.

As you ride your district cleaning up your fall work, are you keeping your eye and senses peeled for the possible location of one more trail or road sign? Put yourself in the place of a tourist or a new Forest Officer and see if you couldn't get lost. The new roads and trails will require many new signs, and I'm sure there are still many odd places at which a stranger will wish you had placed a sign." (Santa Fe News)

Airplane Visit Has Far-Reaching Effect in Jackson

Heretofore, the kids have habitually played cowpuncher and bronco twister; now, however, the stick broncos, the improvised saddles, spurs, chaps, etc., have been relegated to the rubbish pile and in their stead have come into evidence herds of improvised miniature airplanes. Instead of the shrill "stay with him," "scratch him," etc., we now hear all about tail spins, nose dives, etc. All this disturbance is caused by Aviator Barker paying us a visit with his airplane.

One evening about 6 P. M. a humming was heard overhead and lo and behold an airplane was sailing over Jackson and within ten minutes had made a landing and the aviator was explaining that he had left Blackfoot, Idaho, about 4:45 P. M. and flew in a bee line for Jackson crossing the range about ten miles south of Teton Pass. He stated that the only cause for anxiety was the total lack of landing places for many miles had it been necessary to land in an emergency. Mr. Barker remained with us three days and was almost constantly in the air. He stated that conditions for flying were good and that no doubt in the near future we would see many planes. The last we saw of the plane it was headed down Snake River so heavily loaded with Jackson Hole coin for carrying passengers at $1.00 per minute that it flew like a mud hen, barely able to get its feet out of the water.

Our next allotment estimates will ask authority to trade our jitney in on an airplane, we are so enthusiastic over the smoothness of the air roads and the absence of mud.

Teton.

Sure, Archibald, the world owes you a living; but you can't turn the debt over to an agency for collection.

B-4 Daily News.

Notes from Ranger's Diaries

November 27, 8 A. M. Today is Thanksgiving Day. Staid home and fed up all day.

9 P. M. Quit eating and went to bed very thankful. (11 hrs (eating) supplies & equip.)

September 12. Sunday. When I got up in the morning I saw two bear in front of the station. Went out and potted them. Skinned them out and took the fat to the station and was rendering it out when I saw another bear then went out and potted him. (Poor day for bear) Teton.

"Just about the time you think you can make ends meet some one moves the ends!" Cache Register.

The committee appointed to select the winning fire slogans at the recent contest has made the following awards:

FIRST PRIZE: Special allotment of $50, to be expended under the direction of the Supervisor, in conformity with administrative and fiscal regulations, for some purpose which will serve to improve the living or working conditions of the winning officer:

Awarded to Forest Ranger W. E. Tangren - La Sal
for the slogan
"PLAY SAFE WITH FIRE"

SECOND PRIZE: A similar special allotment of $25.
Awarded to Forest Ranger Clarence D. Huestis - Salmon
for the slogan
"PLAY FAIR - PUT YOUR FIRES OUT"

FIRST HONORABLE MENTION:
Awarded to Forest Ranger W. E. Tangren - La Sal
for the slogan
"TRUST NO FIRE HOWEVER SMALL"

SECOND HONORABLE MENTION:
Awarded to Forest Ranger Felix Buchenroth - Teton
for the slogan
"ENJOY THE FORESTS
but
"BE CAREFUL WITH FIRE"

District 5 - California District

A Meeting of the Five Northern Counties Association was held at Redding Oct. 22 and 23. A movement to organize the Boards of Supervisors of the five counties was inaugurated and carried through - Each Board elected a representative and the five will meet at stated intervals to consider questions of importance to the five counties and proper action needed. Mr. John H. Williams of the California State Board of Forestry made a short appeal for the backing of the organization in the enforcement of a slash disposal law. The District Forester urged greater local appreciation of the value of the timber resources of the five counties; the need of more adequate protection from fire; paid his respects to the "light burner"; and suggested that the State Board of Forestry be given all possible assistance in carrying out its ideas on a slash disposal policy. Supervisors Hall and Dunston were in attendance. It was a most representative meeting of men of affairs of the counties of Lassen, Modoc, Shasta, Siskiyou and Trinity counties.

A Nomadic Horseman Prospector!

The following is copied from a recent trespass report: "Finding the trespasser on the mountains is no easy matter as he camps wherever he finds water, and travels all day through the woods. It is only occasionally that he follows roads and trails. When the Forest officer ran onto him at a fire he had very few clothes on, bare footed, and had not had a shave or a hair cut for several months. He was walking around the fire line scratching back the live coals with his bare feet."

The trespasser grazed 23 head of horses on the National Forest in 1919 and 1920 without a Forest officer ever having seen the horses. Some grazing administration, and I'd say some fire cooperator!

Why Fighting Fire is Hard Work

We know now why fire fighting is such hard work. Studies have been made on the relation of climate to strength and it has been shown that temperature and humidity are the important factors. Persistent exposure to temperatures over 86 degrees F. results in great fatigue even though no physical efforts are made, while persistent effort under such conditions is exceedingly hard on vitality, each few degrees above the limit reducing working strength in a geometric ratio. Similarly a relative humidity below seventy and higher than eighty per cent is harmful to the human system. Under such conditions or with a combination of high temperature and low humidity, the impairment of physique due to exhausting may be so severe as to require a considerable time of rest for recovery to normal strength. Pronounced fatigue occurs in work requiring concentration and under disagreeable conditions with the climate against you, so that we can give fire fighting the palm.

As a result of smelter action in the Redding District, the vegetation on 135,000 acres has been more or less affected. On 49,000 acres all vegetation has been killed and more or less damage done on 87,000 more. Most of this is brush land and poison oak apparently is the least affected by the fumes, while knob cone and digger pine are the first trees to go. Nature don't do it right - the poison oak should go first and the trees last. Even a knob cone & pine can be used, but who wants the poison oak? (RS)

Arrangements are being made by the District Office to assist rangers and their families, who have no library facilities near at hand, to secure books and magazines in which they are interested. All that is necessary is for the rangers to say what books and magazines they want - the District Office Committee will undertake to see that they get them, at no cost except possibly postage.

The marine borer survey of San Francisco harbor is in full swing. Mr. T. G. Townsend, engineer from the Forest Products Laboratory, is on the job, and the work is being supported by a large committee consisting of the chief engineers of five railroads, four oil companies, the United States Army and Navy, the U. S. Engineer Corps, and four shipbuilding companies. Mr. Hill has also been appointed an honorary member of the Committee and executive officer. The situation is strenuous - an average of about one big dock a week now caving into the Bay on account of marine borer destruction. With creosoted piling costing $1.00 a foot, it can be seen what renewals amount to, such as that of the Southern Pacific Company at Port Costa, which will replace 14,000 piles running up to 100 feet in length.

On Thursday night, October 28, a Progress Dinner of the Committee was held, at which the following was the bill of fare:

District 5 - California District (Continued)

Me-an'-you

Western Teredo Cocktail-Navalis
Puree of Shipworms with Saline Noodles
California Infested Olives
Baked Striped Filet of Sphaeroma - Toxic Sauce
Potato Test Specimens Barnacle Rolls
Whole Roast Stuffed Limnoria - Creosote Dressing
Asparagus with Plankton Sauce
Distillate Spuds
Combination Salad - Xylotrya Pallets and Free Swimming Larvae
Carquinez Ice Cream with Three-Fourths Inch Penetration of the Black Oils
Calcareous Cake Preservative Cheese
Coal Tar Noir en Demi-Tasse

District 7 - Eastern District

On October 27 a memorial to George W. Vanderbilt provided by the Southern Forestry Congress was unveiled. The memorial consists of a bronze tablet set in a large boulder at the entrance of the Pisgah National Forest. The tablet bears the following inscription:

"Pisgah National Forest
This portion eighty-three thousand
three hundred and ninety-eight acres
was formerly Pisgah Forest
established by George W. Vanderbilt in
1891 and the earliest example of forestry
on a large scale on private lands in
America
Acquired by the United States
21st May 1914"

The boulder is a granite monolith 7' x 5½' which was secured by Forest Supervisor Rhoades for the purpose.

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WEEKLY BULLETIN

Forest Service -- Washington Office

(Not for Publication)

November 8, 1920.

Utilization

The word utilization, according to Webster, is "the act of making a thing useful; turning to profitable account or use; making use of." It is a word of very common usage in the Forest Service. We apply it to things called trees and their products, or to range and its forage. Its application is the subject of much study in all matters of forestry.

It might be worth while to consider its applcation to the problem of employment. Turning an employee into "profitable account or use" is the greatest of all human problems. Individuals wrestle with themselves over it. Executives and managers find it one of the chief matters of concern. Great commercial organizations are dealing with it today on a scale heretofore undreamed of. In every phase of human activity the public's one insistent demand is Service.

If a real service is not performed, a profitable account or use can not be claimed for it. However, the subject to which society and industry are giving attention to-day is the complete utilization of man's highest capabilities. The development of man's highest capacity and ability makes for individual improvement, and the improvement of individuals crystallizes into waves of progress that carry on their crests great industrial and social reforms. Reform is only another way of expressing progress. Going forward is inherently man's natural trend. It is as inevitable as the progress of the sun in its orbit.

No man has yet reached that point in his career where he feels that he is performing perfectly, living up to his highest capacity. Leonardo De Vinci and Theodore Roosevelt were examples of wonderfully versatile men and yet they both fell far below the perfect man of whom Thoreau says, "His capacities have never been measured; nor are we to judge of what he can do by any precedents, so little has been tried."-------"To be awake is to be alive. I have never yet met a man who was quite awake. How could I have looked him in the face?"

"The success of the general manager depends on how many men he can draw out of the routine class," is the subject of an article ably treated in a recent issue of "System." "The development of these men so far as I have had a part in it," modestly writes the author, "has come from taking a constructive attitude toward the faults I have discovered in them. It would have been easier to have taken some of the faults as fixed and permanent limitations, and to have placed the men and outlined their future accordingly, but the fact is many of their worst faults are not permanent." "Taking a constructive attitude toward their faults," is good business, profitable business too, because it's more, far more than philosophical, it's Christian and brotherly!

The writer of the article says again that, after this and other kinds of training of his men, he expects them to come to him not with inquiry or for instruction but with decision. He wants them to say to him, "We are going to do this."

Debate was on as to where the big mill of the Potlatch Lumber Co. should be located. Some proposed one location, some another. A man arose in that meeting who had been trained to assume responsibility. "Gentlmen," said he, "The mill will be built here," putting his finger on the map where the town of Potlatch and the big Potlatch mill now stands. Men with initiative like Mr. Deary of the Potlatch Lumber Co. are scarce. What is it that makes it so frequently and apparently impossible for us to have men who can say, "We are going to do this."

R. P. McLaughlin.

Timber Sale "Figgers" Revised by D-7

This is the season of the year when District 7 pauses in its efforts to outdo the Europeans in the practice of forestry long enough to run up the rattlesnake flag and under its motto, "Don't Tread on Me," deliver a hot broadside into the Bulletin's annual timber-sale statistics.

Experience has taught us that no one else can blow our horn quite to suit us, and we feel called upon to take our silver cornet in hand and give a rendition of that grand old tune "District 7, Where Art Thou?"

Timber Sale "Figgers" Revised by District 7 (Cont.)

Mr. Preston's set of timber sale "figgers," as published in the Bulletin of October 25, fails to do us full justice. In the last two tables there are a number of errors as regards statistics for this District; and, what is far worse, there is a serious omission in the income column.

A District as small as ours should be excused for being a bit sensitive in matters of this kind, and when we have an item of $27,955.39 left out of our credit column we can be expected to get hostile.

Turpentine sales and sales of tanbark are a profitable part of our annual sales business. There can be no question that the receipts from the sale of tanbark should be credited to stumpage. Bark forms just as much a part of the value of a tree on the stump as does the cordwood in its branches or veneer wood in its stumps. In the case of turpentine, if the reader does not believe that naval stores form a part of the value of a longleaf pine tree on the stump, he should compare the selling prices of cupped and uncupped timber. In our turpentine sales we are simply appreciating in advance of the final cutting a part of the tree's value. District 7 holds that the receipts from both bark and turpentine sales should be taken into account as respects their timber sales, as well as in calculating average prices per M feet.

Now let us take up the fourth table of Mr. Preston's article and shake the stuffing out of it: In the first place, we find that the Minnesota Forest is ranked as No. 1 in the Forest Service on high stumpage values; as a matter of fact, the timber sold on the Minnesota Forest was not National Forest timber at all and never has been. It belongs to some Indians, who live up there, and who, because of the H. C. L. or the eighteenth amendment, have turned it over to the Forest to sell for them. So far as the records go, since this Forest made no sales of National Forest timber, it should have no place in the list. According to our records the correct stumpage figures for the White Mountain Forest and the Alabama are, respectively, $5.51 and $1.72, but we will not harp on a small error of this kind; we only mention it to show that we are honest. Owing to the failure to credit bark sales on the Shenandoah and the Nantahala Forests, they were both wrongly omitted from the list. The correct table, as we see it, is as follows:

1.	White Mountain	$5.51	D-7
2.	Ozark	5.36	D-7
3.	Shenandoah	4.65	D-7
4.	Cherokee	4.01	D-7
5.	Beartooth	3.90	D-1
6.	Nantahala	3.62	D-7
7.	Kaniksu	3.41	D-1
8.	Pisgah-Boone	3.36	D-7
9.	Santa Barbara	3.34	D-5
10.	Beaverhead	3.20	D-1

In the summary by Districts our cut in commercial sales is given as 46,977,000 feet B.M. and the average price per M as $3.21. The actual cut is 47,599,000 feet B.M., and the average price per M feet is $3.77.

Our average stumpage price as calculated in the statistics in the Bulletin is not truly representative of our sawtimber stumpage rates, but reflects the large amount of salvage and clean-up material we are now almost giving away to get it out of the woods. The following are some of the prices we are getting for sawtimber stumpage in Class-D sales:

Yellow pine	Arkansas	$7.55	per M
Yellow poplar	Cherokee	11.00	" "
White pine	Unaka	10.50	" "
White oak	Unaka	10.60	" "
Spruce	White Mt.	11.30	" "
Chestnut	Unaka	7.25	" "

It is also interesting to note where the District stands in the Box score on the basis of the net income per acre per District from timber sales. Some people might go so far as to say that a District's position in this line-up is the best indication of the success of its timber-sale management:

1.	D-7	$0.072	per acre
2.	D-5	.021	" "
3.	D-1	.016	" "
4.	D-2	.013	" "
5.	D-6	.012	"" "
6.	D-3	.011	" "
7.	D-4	.003	" "

In calculating the results in the above table, we have used the net acreage in all cases as shown in the official figures of June 30, 1920. In the case of District 7, we have even included large areas which, while purchased and under protection, are subject to timber reservations; in other words, areas from which we could not sell timber if we would.

In the article in the Bulletin, District 7 was given the booby prize for the lowest cut in commercial sales based on the record of the Alabama and the Wichita. It might be stated that the Wichita is not operated at all as a National Forest, but is a game preserve where Frank Rush is raising buffalo bulls for the buffalo robes and the mounted-heads-for-clubhouses trade.

We might also state that we claim a prize for the lowest figures as follows:

1. Percentage of area burned annually.
2. Percentage of non-income producing areas.
3. Number of Forests and working circles without approved management plans.
4. Number of sales where close utilization is not practiced; and, last but not least,
5. Discrepancy between income and expenses.

I. F. Eldredge.

New Method of Felling

A new method of felling timber known as the "V-bed," which is said to effect a great saving in lumber, to make the "kick back" practically impossible, to prevent the "splinter draw," and to permit tree choppers to cut considerably more lumber in a day than by the older methods now in use, has been developed at the plant of the Edward Hines Yellow Pine Trustees at Lumberton, Mississippi.

In using the "V-bed" method a deep V-shaped wedge six inches long is cut in the stump of the tree on one side. Each member of the saw crews should be provided with an ax so that the notch can be chopped out on either side of the V at the same time, thus cutting in half the time required by the old method. The saw is then started from the opposite side of the tree so that it will cut through and meet the upper points of the V.

It is claimed that trees felled by this method will break clean and pull no splinters from the butt, since the entire circumference of the tree has been cut or sawed and the only possible breaking point is at the heart of the tree. The V-wedge remaining on the end of the log not only prevents the tree from "kicking back" over the stump in falling, but in fact actually causes it to jump away from the stump a distance of several feet. It is claimed by those who are advocating the adoption of the new method that, if if were applied to every tree now cut in the United States, the saving in lumber would amount to the total annual product of several large mills.

According to the Southern Pine Association, twenty-five per cent of the time lost on account of accidents in logging operations of southern pine mills last year resulted from the fall of trees, logs, etc. A large proportion of this was directly attributable to the "kick back" of falling trees. By eliminating this cause, it is claimed the "V-bed" method will produce a further saving in dollars and cents, and what is still more important, will result in an inestimable saving of life and limb.

Who Smokes Cigarettes?

Some years ago a severe forest fire threatened the lives and domicile of the teachers of a summer school conducted within the Forest boundaries. To protect the institution and the surrounding timber, Forest officers had been working long and hard. When the lull came and the fire seemed about to be put out, one of the local rangers said to the Deputy Supervisor, "Say, this fire business can be handled easy." "Well, how?" asked the Deputy. "You just keep women out of the Forests." "I don't see how that will help," replied the Deputy. "Well," said the ranger, "all these fires start from cigarettes, and every fellow that has a girl smokes cigarettes."

The Weighty Imponderable

It has been stated that Bismarck, in discussing war, admitted that the imponderable things were actually the decisive factors in war. This was proved in the last war, called by some the Great War, when the moral and mental attitude of the greatest number prevailed against material preparedness.

How much more decisive are the imponderable things in times of Peace!

The Weighty Imponderable (Cont.)

Statistics such as appeared on page five of the Weekly Bulletin of August 2 are valuable as surface indications of material conditions and the amount of a certain kind of work that has been performed, but they give no indication of the most vital work that is being accomplished - the imponderable.

It is unfortunate that, as concerns the work of a Forest Officer, the harvest comes so long after the planting; for, before the imponderable has materialized into the tangible, he has more often than not moved on.

And the imponderable things - things that can not be proved by ocular demonstration or by mathematical calculation, but can be realized by those of keen perception - are part of the results, are the decisive results, achieved by the productive Ranger.

The attitude of the majority of the people living on or near the National Forests, the attitude of those who come in contact with the National Forests, and the attitude of any who ever think about the National Forests, toward the aims, objects, work, and personnel of the Forest Service are the vital factors, the imponderable things, that make or mar, and require more time and effort to achieve than all others.

Cecil R. C. Reindorp, in
Cleveland Bulletin.

Clerks' Details and Meetings

Reference is made to the query, "What do the Clerks Themselves Think?" about District office details and clerks' meetings:

In my opinion each clerk should have an opportunity--the earlier the better--to visit the District office, especially the Office of Accounts. A chance to examine the vouchers received from other Forests and see how they are disposed of would be beneficial. I believe such details need to cover not more than a week.

While details to the District office would be of value to a clerk, I should not like to have these details substituted for clerks' meetings. The value of meeting the other clerks, getting their ideas and suggestions, as well as those of other members of the Service, surely would exceed that derived from a District office detail. Would it not be advisable to give each clerk a chance to see how the material he forwards is handled in the District office, and also to continue having the meetings?

E. L. Springer,
Clerk, Wenatchee N.F.

Lumberman Wants Sustained Operation

An examination of a sixty-million-foot tract of timber on the South Fork of Tongue River, Bighorn National Forest, has just been completed by Mr. C. C. Warren, General Manager of the Warren-Lamb Lumber Company, with his logging superintendent. Considerable effort was necessary to get the examination made, but Mr. Warren on leaving, to use his own words, was "very favorably impressed with the possibilities."

The sale would be particularly desirable from the Forest Service standpoint at this time, as there is already a flume in existence, some 27 miles long and built at tremendous cost. In order to interest any parties possible in this proposition, a survey of the flume was made and it was found to be in an excellent state of preservation. This flume was last used in 1911 by the Big Horn Timber Company. Three or four years more would practically wipe this improvement out, whereas it is roughly estimated that now it can be put in working order for $50,000.

Mr. Warren is much interested in forestry and stated that, should his company decide on a policy of expansion which would permit them to go into this proposition, he would wish a statement of policy from the Forest Service relative to provision for a sustained operation. It would be his plan to establish a highly specialized plant, probably electrically operated, where the closest of utilization could be obtained. He felt that the establishment of such a plant, together with the extensive logging operations, would give rise to a permanent community of some size and that, in fairness to the individual workers, the community, and capital, a sustained operation should be maintained. I believe that this would be perfectly practical, but it would necessitate the inclusion of several large logging chances in the working circle and their retention for the purpose of supplying this operation alone.

Limited investigations had been made, showing that greatly increased growth had occurred in the stands already cut, and many of these cut only

Lumberman Wants Sustained Operation (Cont.)

fifteen years ago could now be logged again. Mr. Warren was more than enthusiastic over this possibility and stated that while going through the old cutting he was much impressed with the chances for making a second cut.

All this was done without cost to the Forest Service, the Sheridan Chamber of Commerce furnishing transportation. On returning from the area a committee of seven business men met Mr. Warren and myself at a dinner tendered by the Chamber of Commerce. At this dinner Mr. Warren outlined his plans, if the deal went through, and the men present guaranteed certain essential things. At this dinner the men present were much impressed by Mr. Warren's statement that in his opinion the timber on the Bighorn Forest was a greater asset to northern Wyoming than its great coal mines, in that, under Forest Service management, the resources would be absolutely a permanent asset.

Should this proposition come to a head a real working plan will have to be made before this company would go into it, and probably the size of the operation gauged to the yield of the working circle decided on. The results would be tremendously interesting to foresters.

E. W. Tinker, Bighorn.

A Drawback to Standard Plans

Although no member of any Forest organization will oppose any scheme which will result in decent livable houses for the enjoyment of present members of the Service, yet it occurs to me that standard plans to which buildings may be ready-cut will necessitate confining the plans to relatively few types or styles. This will have one advantage, that of making a building advertise the Service by its distinctiveness and uniformity with other Service buildings. But will it be possible to have it fit in or harmonize with its surroundings? I have seen only one Service building which did--a log cabin built on the style of the Swiss Chalet on the Santiam National Forest by John Short. Professor Peck, Landscape Engineer, was very complimentary in his remarks about this cabin. Other Forest Service buildings which I have seen have been very ordinary in architecture and certainly no asset to the surrounding scenery--rather the reverse, and usually they hit the observer in the eye with a glare of white entirely out of place in the greens and browns of the surrounding vegetation. In our permits we attempt to protect the scenic value of the Forests by clauses specifying the types and locations of summer homes, hotels, etc., and on roads within the Forests by preventing unnecessary cutting of timber along the right-of-way. It seems to me, whether we adopt standard plans or not, this feature should be considered in connection with every building, except of course, such buildings as lookout structures, patrolmen's cabins, etc., in the more remote parts of the Forests.

N. F. Macduff.
Cascade.

Somebody Started Something

The item "What is your time worth?" by Mr. Morrell in the Weekly Bulletin is rather interesting and something of a surprise to me as far as his statement about the 100 field day average per man is concerned.

I have carefully checked over my diaries and find that for the fiscal year 1920, ending June 30, 1920, I have put in 165 good, honest days of actual field work and spent 75 nights in the field. My diary for the fiscal year 1919 showed 191 field days and 79 nights spent in the field.

I have also figured up the receipts and expenditures for the fiscal year ending June 30, 1920, and this also took me very much by surprise. It is as follows:

Receipts:		
Grazing, S. & G.	$2905.06	
" C. & H. . .	1025.39	
" Trespass . .	180.15	
Timber Sales	2165.80	
Special uses	122.50	$6398.90
Expenses:		
Ranger's Salary	$1340.00	
Travel expense	182.49	
Forage	114.99	
Guard's salary .... 7/1 to 8/14/19	132.00	
Total		$1769.48

This shows a difference of $4629.42, and I am sure that this South Fork District will much more than pay for the cost of its administration. It has been necessary for me to slight part of the work in order to get by.

Somebody Started Something (Cont.)

The question is, which part of the work, if any, shall be neglected? I am not inclined to believe that there is not another ranger district that can equal this record, but I am confident that there are very few that have a greater amount of work.

Hagerman - Rio Grande.
D-2 Bulletin.

Checking the Doyle and Scribner Log Scales

An opportunity for checking the Doyle and Scribner log scales with the net lumber tally for logs of different diameters was afforded during a mill scale study conducted at Proctor, Arkansas, by the U. S. Forest Products Laboratory. The mill was a single band cutting red and white oak. The red oak logs were plain sawed, except that the last quarter of exceptionally good logs was quarter sawed. The white oak logs were plain or quarter sawed to the best advantage--that is, logs up to 22 and 24 inches were plain sawed and larger logs quarter sawed. Approximately 90 per cent of the lumber was 1-inch stock, 5 per cent 2- and 3-inch stock, and the remainder crossties and small timbers.

The Doyle scale gives an exceptionally large overrun for small logs. The Scribner scale is more accurate than the Doyle scale for small logs, but often gives too small results for large logs.

A combined Doyle-Scribner scale using the Doyle scale on logs up to 28 inches and the Scribner scale on logs 28 inches and over would give the largest possible overrun for both large and small logs.

The overrun or underrun will probably never be the same in any two mills, because of variations in thickness of saw kerf, thickness and width of material sawed, percentages of the different sizes, quality of the log with reference to defects, efficiency of labor, and like factors.

Are We Making Satisfactory and Consistent Progress in Range Management?

No! I say "no" even though I recognize the fact that there are some Forests or at least some Ranger Districts, where a great deal of steady progress has been made. What is the reason or reasons for the lack of consistent and satisfactory progress in the large number of other cases? Yes! Yes! ! Don't all speak at once. I can agree with you that our present force is carrying an overload and that it is physically impossible for the personnel to do all the things that should be done to insure entirely satisfactory use of the range and to carry, at the same time, all the other work and also the new lines of work, such as recreational activities with their increasing demands.

Let's agree, for the sake of the argument, that neither you nor I are responsible for the lack of sufficient help on a number of important grazing Forests, but how about the second reason for lack of consistent progress? I say, after a great deal of study on the situation, that this second reason is the lack of proper leadership, initiative, planning, headwork, and consistent efforts to exedute and carry out good plans. It was the intention to define this second reason in terms broad enough to include, not only the Forest Ranger, but on up the line--yes, considerably higher than the Ranger, who at best gets his share of criticism.

We are marking time all along the line--almost. We have been taught, at considerable expense, and have learned a great deal about better methods of range management. Many of these methods have been tested under a wide variety of conditions by expensive experiments and demonstrations and have been proved to be sound. The methods developed, however, have not been brought into general administrative practice. Indeed, it might surprise many to know in how many cases such primitive duties as posting forest boundaries and marking sheep allotment boundaries have not been accomplished; how many cases where sheep are handled all summer with little or no regard for the three-night-bedding rule; how many places sheep have been allowed and are now being allowed to bed excessively and to denude bed grounds of several acres in extent; how many places where cattle are being salted only along creek bottoms and wagon roads and the adjacent area is being overgrazed, and, at the same time easily accessible forage on the slopes and ridge tops is being left unutilized; how many cases where sheep range is included within cattle allotments and vice versa, for no other reason than that a mistake was made five, ten, or fifteen years ago when the division between the classes of stock was made arbitrarily and on paper, in many cases, but to this day have not been corrected. Of course many of these erroneous division lines were unavoidable and some have been corrected. In numerous cases, however, the corrections were not made until outside pressure forced the change.

Many other examples could be cited where the first principles of range management have not yet been put into effect on our National Forests, to say nothing of recent development in the science of pastoral management. I refer to such well-established principles as deferred and rotation grazing, adequate salting practice on the range, revegetation of depleted ranges, the allotment of particular ranges to the kind of stock to which it is best adapted, and a recognition of the relation of game and recreational activities to the proper use of the range.

What is the reason for this backward state of range management as "she is practiced" when our Forests have been under administration for fifteen years or more? I would have each man who has anything to do with grazing, from the newest guard in the organization on up, to ask himself honestly this question with no attempt to befog and becloud the issue by bringing up some other issue, such as being shorthanded, or some other excuse which we previously agreed to eliminate in order to get down to brass tacks.

The real reason, in my humble opinion, after pretty careful study on numerous Forests, from the Mexican border to the Canadian line, is that we are marking time. We are handling our jobs in most cases in an unimaginative manner, not trying to kill two birds with one stone--and doing it. Do we ride fifteen or more miles on horseback or in the jitney to scale a few logs, or to mark a little patch of timber, or to catch a trespasser "with the goods," or to show a sheepman his boundary, or one of the thousand and one duties we are called upon to perform; and do we fail in riding to and fro to observe where salt grounds should be posted or where a much needed drift fence should be located, or a spring developed, or to see a sheep-herder, who needs to be told with a considerable amount of firmness that he has overstayed his limit three to ten nights on the bed ground; or that a telephone bracket is down; or that some boundary post needs resetting; or that the cattle should be pushed from the lower to the higher range? Do we think, "Let George do it" or, "The P.U. guard will soon be on and he will do it?" I'll say we do. Does the Grazing, Operation, or Silvicultural specialist make an inspection and see only the things along his particular line, when he might see and call attention to many other things needing attention? I say we do. We are overlooking many bets in our everyday work by allowing the old think-tank to travel along in the same old rut without getting near enough out to see over the edge. In this way we fail to make proper plans and to execute them. This is the way leadership is lacking, by failing properly to encourage and to require better results for time and energy expended.

I once heard of a Supervisor who stated that, in the course of several years in charge of an important grazing forest, only three out of about forty ranger grazing reports submitted during that time were of any value. Does this indicate lack of leadership somewhere? Probably most of the thirty-seven other reports represented an earnest attempt to submit something of value. I feel that most rangers and guards, as well as the rest of the Forest Service personnel, are anxious to learn and appreciate being taught how to handle their jobs more effectively. In the course of my inspection, local Forest officers have often shown marked enthusiasm for any pertinent information, suggestions, or constructive criticism that would assist them in their work. The statement has been made many times at the conclusion of a field trip with a Forest officer that this was his first opportunity in many years of taking another man from the organization over his problems on the ground and securing the benefit of an outside viewpoint and expressing the hope that inspections would be more frequent. I believe this attitude is characteristic of men in the Forest Service all along the line and is one clear indication of lack of leadership. From these examples it seems evident that this lack of leadership is one of the real reasons for making little consistent progress.

If we can't pull ourselves out of the rut, do we hope to pull an organization twice as large (should Congress suddenly permit us to fully man our Forests) out of the rut? I doubt it. I believe that it would be wholesome for each to take himself or herself, separately and individually, in hand out in the woodshed and firmly resolve to pull out of the rut, and then do it; to determine where he or she is lacking in leadership or in executing plans, etc., as the case may be; to kill two birds with one stone at the first opportunity, then hunt up another opportunity and ditto; then do it quite frequently thereafter--oh, quite! After all this has been done, some one will come along and say "Verily, verily, here is an efficient man. I am looking for an efficient man for a large job that I have in mind, and, lo, I have found him!" Was it Emerson who expressed the general idea that the world would make a road through the wilderness to your front door, if you built a better mousetrap or painted a better picture than anyone else has ever done? I think he was right.

L. C. Hurtt.

Washington Notes

Stanley L. Wolfe, of the Office of Forest Economics, has resigned from the Forest Service to accept a position as valuation engineer with the timber section of the Bureau of Internal Revenue. Mr. Wolfe has been connected with the Forest Service for a number of years and was with the Twentieth Engineers in France, receiving several citations and a decoration for his service there. Here's luck, Stan!

Assistant District Forester C. E. Rachford is en route to Washington from San Francisco for an extended detail to this office, during which time he will busy himself with a very comprehensive study of the whole subject of our grazing fees, with a view to having in hand sufficient data upon which to base readjustments when the present five-year permits expire at the close of the grazing season of 1923. It is the Forester's idea that not only should there be certain readjustments between different Forests, but also that the charges in the future should be based upon the value of each range or group of ranges, it being freely admitted that some ranges are far more valuable than others on account of their accessibility, forage cover, and surface conditions as regards the movement of stock over them. All these matters "C.E." is expected to study mighty carefully and fully. Mr. Rachford is stopping off at Albuquerque and Denver to discuss with the District officers his plans for this investigation. He will arrive in Washington about November 15th.

Mr. Fagan, of the Office of Accounts, has received from District 5 a large manila envelope which indicates the saving possible by using envelopes of this kind over and over. The particular envelope in question bears about seventeen cancellation stamps, and a note from the District states that in ordinary course it would have been good for about five more round trips between the Angeles Forest and the District Office. This is some record.

A letter dated October 3 just received by Forest Examiner Tillotson from Mr. Nils B. Eckbo, who is now located at Pretoria, South Africa, and who was formerly a member of the District 4 organization, may be of some interest to readers of the Bulletin. Mr. Eckbo states:

"I am much pleased with the conditions in South Africa. As Officer in Charge of Timber Investigations, I have any amount of work to do, and it is all of a most interesting nature. Have been through the Union now and obtained a bird's-eye view of the conditions. On my last trip I had a chance at some of the wild game."

Forest Products Laboratory

A study being conducted of the use of wood in vehicle manufacture has disclosed that, in the manufacture of farm-wagon-hubs, the use of yellow birch from the Lake States is increasing.

White oak and the so-called "black-birch" from the Alleghanies are considered better, but are not available in sufficient quantity. One firm reports the average life of a yellow birch hub to be ten years and of white oak eighteen to twenty-four years.

An outstanding feature of the automobile industry is the increasing proportion of closed cars to open cars. This means a larger consumption of lumber, since a closed car takes from two to three times as much lumber as an open car, and the lumber must be of a better kind and quality in order to insure rigidity, freedom from warping, and good appearance. Another important movement is the almost universal use of steel rims in place of hickory rims. This will save a lot of hickory of high quality.

Wagon manufacturers are looking for other species of wood for wagon-box boards. Red gum has been the species most commonly used of late years; but, on account of its increase in price and its tendency to twist, substitutes are being sought. Some are trying redwood; others, spruce and Douglas fir; and one of the firms visited is going back to yellow poplar. The trouble with the conifers is that it is so difficult to "hide the grain" with paint. Cottonwood is becoming too scarce to meet the demand.

Soft elm is used almost exclusively in the manufacture of hubs for buggies. Hickory (including some pecan) is used for spokes, rims, and shafts, and there is little chance for substitution. Red gum and tupelo were the principal woods used for sides and ends of the body. One firm which purchased bodies ready-made said they had to replace about one hundred bodies in the last year-and-a-half on account of defects developing through the use of gum. So far, plywood does not seem to be used extensively for buggy panels.

District 1 - Northern District

Five Forests, the Beaverhead, Custer, Helena, Jefferson, and Madison, graze 63 per cent of the cattle and horses, while five Forests, the Beaverhead, Helena, Jefferson, Madison and Absaroka graze 52 per cent of the sheep. Although these Forests apparently monopolize the volume of the grazing business, the figures do not necessarily indicate that other Forests in the District do not have an intensive grazing problem; at least half of them have a considerable volume of grazing business which demands close supervision.

An unusually large number of applications for sheep were canceled this year, on account of several factors, the hard winter and tight money causing many sheepmen to reduce their flocks or go out of the business altogether.

Grazing seasons for cattle and horses as a rule suffered a pretty general reduction in length throughout the District this year, the principal reductions being for two weeks at the beginning of the season, since most supervisors realize that too early grazing is an evil which must be avoided.

District 2 - Rocky Mountain District

Ranger "Milt" Ames of the Medicine Bow killed a 250-pound mountain lion last week. It is not known whether "Milt" killed this varmint with his trusty Lugers or not; but since he has been known to beat a man using a 30-30 Winchester at one hundred yards with this gun, we have absolute confidence in his ability to lay low anything under the size of an umbrella-ear elephant.

Assistant District Forester Thompson is making a careful study of the timber-sale situation on the Black Hills and Harney National Forests with Lumberman Donery who is doing some check scale work and making a study of the overrun. There are many small sales and the future development will be along the lines of small operations. There is a very apparent need for a management plan based upon pretty reliable market data, so that we may be sure of providing a sustained yield and an annual cut ample to take care of the Black Hills consumer, and also for the lumber needs of the surrounding country. Just how far away from the Black Hills we should go in providing for future lumber production needs to be studied also. The marking policy which has been pretty closely adhered to has provided for saving a thrifty stand for another cut in twenty years, and it seems quite certain that we are safe in promising an ample, sustained yield without greatly restricting the present annual cut. It is planned to give attention to the management plan this winter and whip one into shape as soon as possible.

The second season's illustrated lecture course on forestry subjects to children of the Denver schools has been inaugurated by Miss Margaret Wallace of the District office, who last winter lectured to almost 6,000 pupils.

When it comes to getting local cooperation in putting over recreation, the San Isabel comes near corralling the Grand Sweepstakes. The latest is not only a new idea in Forest advertising, but something altogether snappy in hotel management. Mr. Phil. H. Philbin, Assistant Manager of the Congress Hotel, Pueblo's largest caravansary, has informed the Forest Service that his Company plans to make a special feature of the San Isabel development. The Congress is a hotel consisting of two parts, one built a number of years ago, and a comparatively recent addition. In the old part and just off the present main lobby in the new section is a large room about 40 x 40 feet. Formerly this was used as the lobby of the old hotel, but the present office and lobby are in the new section. Philbin, who is "on his toes" when anything new and big appears on the horizon, plans to make this big room a hotel "den" and call it the San Isabel Room of the Congress. In the room it is planned to place a large, detailed map of the Forest, worked directly on the wall surface; samples of ores mined in the San Isabel; specimens of woods growing in the region; pictures of the interesting places in the Forest, and mounted heads of game taken in the Forest. This will amount to a permanent Forest Exhibit in a fine, large, well-located room. This would have been impossible had not the recreation plans of the San Isabel Forest been so well and comprehensively organized as they are. Recreation is "putting over" this Forest to the residents of the Arkansas Valley in a way that has never before been accomplished during the many years the San Isabel has been at their very door. The Congress and San Isabel, so far as is known, are the first hotel and Forest to combine in putting over a permanent advertising scheme with such general publicity and of such a magnitude. If any other Forest can show as much "ginger" along this line as the San Isabel cooperating with the Congress Hotel, in Colorado's second largest city, it should be heard from.

District 2 - Rocky Mountain District (Cont.)

The R. M. Hartford Productions, a subsidiary of the National Film Company of New York and Los Angeles, after combing the entire West, have selected a spot about nine miles from the city of Leadville, on the Leadville National Forest, as the scene of their next outdoor picture, "The Golden Snare," by James Oliver Curwood. Mr. Montrose and Mr. Griffin, the manager and cameraman, informed me that they had selected this locality after a long and exhaustive search of the West, as it most nearly represented the "Canadian far North" effect they need. They both express themselves as more than delighted with the scenery of the Leadville. The background of the picture will include Mts. Massive and Elbert, the second and third highest peaks in the U. S. The company will number fifteen, and will have a team of reindeer and two teams of dogs. The Manager, Mr. Montrose, is now busily engaged with a crew of men repairing an old house in the vicinity for quarters for the cast, and is also constructing a 50-foot stockade, a log cabin, and a lean-to which will be used in the making of the picture. The taking of the picture will start as soon as nature drops from 4 to 6 feet of snow in that neighborhood.

District 3 - Southwestern District

Forest Ranger William H. Pierce and wife moved into Flagstaff from the Walnut Canyon Monument on the 19th of October. Mr. Pierce was retired on October 31 under the Act approved May 22, 1920. He has been custodian of the Walnut Canyon National Monument since May 10, 1904. He is one of the real "old timers" in the Service, and it is likely that he has met more people than any man in District 3. From four to seven thousand people visit the Cliff dwellings each year. The Cliffs Ranger Station has been a good advertising feature for the Service as Mr. and Mrs. Pierce have kept everything in tip-top order, and they were always courteous and agreeable. The visitors will miss them. Coconino News Bulletin.

Goen & Adams have started their sawmill on Canyon David. They seem to have a heavy demand not only from local ranchers, but from the Rio Grande valley. No wonder, though, they sell their mill-run for $28, $30 and $32 per M., (depending on width); whereas, in Albuquerque, No. 3 common (the kind you have to carry on a stretcher under an anaesthetic) costs $54. Now this little mill is of a type we want to see more of. The owners threaten to make a little money for themselves; they are providing work in the winter months for local farmers; they are selling lumber direct to the consumer without tribute to the middlemen; and, unlike some of the big mills, they give us a chance to operate on the basis of sustained yield. Manzano Ranger.

Rangers Freiborn and Hand completed the construction of stone monuments, white-washed with slack lime, marking boundaries of the Hever-Reno sheep trail through Pleasant Valley. That portion of the trail in the heavily timbered area, extending from Mogollon Rim to the Naeglin Rim, will be designated by Forest Service blazes painted with white paint and with metal trail sign posters on dead and light-colored trees, which will mark the trail in a way that places the sheep herders strictly up against it for a legitimate excuse to get off. Tonto Bulletin.

A resident of the Santa Ritas was a recent office caller. He wished to open preliminary negotiations for a permit for a community cemetery, as he "lowed" his neighborhood would soon be able to furnish a corpse for the dedication.

Coronado Bulletin.

District 4 - Intermountain District

We often hear foresters wishing for the day when forestry will be as far developed as it is in Europe - Germany and Austria for instance. This advertisement from an Austrian forestry journal may explain this heart-felt desire, in part at least.

"FOR THE PURPOSE OF EARLY MARRIAGE a lady 27 years old, of a good family, brought up to be thrifty, with a dower and 80 to 90 thousand crowns seeks the acquaintance of a Forest Officer."

D-4 Bulletin.

Indians Hunt Deer Without License

On the afternoon of October 15, Ranger Johnson, in company with Sheriff Timothy of Duchesne County, left Duchesne for the purpose of locating a band of Ute Indians whom they suspected were hunting deer without licenses. On the morning of October 16, the Indian camps were found on what is known as "Tub" and "Foster" ridges in the Avintaquin Canyon, District No. 1. The Indians were out hunting when the officers arrived and, during the time they were awaiting their return, a search was made of the camps with the result that ten doe and five buck hides were found. The Indians returned to camp shortly before dark. There were fifteen in all, five of whom produced licenses. They were ordered to break camp and be in Duchesne at noon on October 18 for hearing. At the hearing, the Indians told a straightforward story which tallied in all respects with notes made by Ranger Johnson and Sheriff Timothy. Mr. William O'Neil, Game Warden for Duchesne County, conducted the hearing. He decided to let all of the Indians go for the present except one, who was taken to the Indian Agency at Fort Duchesne where it is proposed to conduct a test case for the purpose of deciding whether or not Indians under the State and Federal laws are authorized to hunt within the boundaries of the old Uinta Indian Reservation without licenses. Ranger Johnson reports that before going after the Indians, he secured information from the State Game Warden to the effect that Indians had no more rights than the white men under the game laws, and that they were expected to live up to such laws within the State of Utah. This case will be watched with interest by settlers in the vicinity of the Duschesne Indian Reservation. The sentiment is that the Indians should be given all consideration due them, but they should also be taught to respect the law.

Uinta Digest.

You may be a genius and you may not.

You may be rich and you may not.

You may have unusual advantages and you may not.

But one thing is certain, and you can bank on it. Use what head you have--use what advantages you have--and work. Then there can be only one result. You are sure to be successful.

D-4 Bulletin.

You are coming in off the summer work, possibly bringing in old cooking utensils, pans, tools, etc. Now is the time to see that worn-out shovels or other useless articles are condemned, others repaired and rehandled if necessary; clean the black off the pots and pans and give them a coat of cooking oil to keep them from rusting or becoming damaged by the weather. DON'T wait 'till spring and then not have time to do it at all. You know there will be an inventory to submit soon so get rid of the useless equipment first.

The Seven Mistakes of Life

1. The delusion that individual advancement is made by crushing others down.
2. The tendency to worry about things that can not be changed or corrected.
3. Insisting that a thing is impossible because we ourselves can not accomplish it.
4. Attempting to compel other persons to believe and live as we do.
5. Neglect in developing and refining the mind by not acquiring the habit of reading fine literature.
6. Refusing to set aside trivial preferences in order that important things may be accomplished.
7. Failure to establish the habit of saving money.

Fishlake-Fillmore News.

"Success consists not so much in sitting up nights as being awake in the daytime."

Lambs weighed up in Sanpete Valley varied from about 64 to 81 lbs., depending on the age of the lambs. The smallest lambs came from what is considered one of the best allotments on District#3, and weighed 58 pounds. Since lambs from the neighboring herds averaged better than 71 pounds, the question naturally arises--Is not this difference due largely to improper methods of handling the stock?

Manti N.F. News Letter.

An unusual condition existed on District#7 this year. Ranger Lindsay reports that as a result of showers which occurred almost every week during the grazing season on his District, some bands of sheep went as long as sixty days without water other than that supplied in the wet forage.

Cache Register.

District 5 - California District

Want Timber for Turpentine

Messrs. A. Peters of 24 California Street, San Francisco, and W. G. Deal, of Hobart Building, San Francisco, have recently made application for permit to turpentine a tract of timber on one of the National Forests in this State. We believe that the present high price of naval stores makes it possible to turpentine California yellow pine at a profit and we are anxious to get a small experimental turpentine sale started so as to work out the procedure for this line of business. At present we have under consideration the Camp Creek area on the Lassen Forest.

Save Your Typewriter Ribbons

If there are no holes in the ribbon put it away in a ribbon box with 6 or 8 drops of typewriter oil on the ribbon. Leave it for a month or six weeks and it will write almost as good as new.

Lumber Prices Cut

The Diamond Match Company, Chico, has announced another cut in the price of common lumber, which makes the price now $52 per M instead of $57 per M. The Adams Lumber Company, Chico, also has announced a cut of 5 to 20% in its prices.

It is claimed that these decreases will mean a reduction of $200 in the cost of construction of a 5-room cottage. Statistics show that labor and other material than lumber make up about 75 per cent of the cost of building. If this is the case, we shall not be able to build very much of a ranger station for $1,000 until there has been a considerable reduction in building trade wages.

A Question of Room Only

Replying to a recent letter from Mr. Redington the State Forester says "I have taken up your suggestion at the Motor Vehicle Dept. in respect to having 'Prevent Forest, Grain and Grass Fires' appear on their new licenses. They look upon the idea favorably and will take the matter under consideration. It is merely a question as to whether there will be room for this addition.

Studies of soils from burns in the chaparral on the Angeles show a decided reduction in the moisture-holding capacity. Before the fire this amounted to 58.2 per cent, and 53.6 per cent immediately after. This had decreased to 34.7 per cent two years later. Thus, 100 pounds of soil with a capacity for 58.2 pounds of water was reduced by fire and erosion to a capacity of but 34.7 pounds two years later. This reduction of 40 per cent in the water-holding capacity is partly responsible for the floods and high water from burned areas.

Editor's Note: It is for studies like these that we urgently need an experiment station in this district.

Replies to the offer of the District Office to send whenever possible to any Forest officer or Forest officer's wife any book which he or she may wish to read; to suggest individual books or series of books on any subject he or she may select; and to provide "study courses" wherever desired, are

Replies to the offer of the District Office to send whenever possible to any Forest officer or Forest officer's wife any book which he or she may wish to read; to suggest individual books or series of books on any subject he or she may select; and to provide "study courses" wherever desired, are interesting. Four have so far been received, the first requesting a "course" in Logging Engineering, the second a request for reference reading on the Education of Children, the third for poetry, and the fourth for "dope on Napoleon, Grant, and Lincoln."

A Tip on Exhibits

"The scheme of the large painted background with the foreground built up to and merging into it," says Paul J. Fair, "is capable of being adapted to many different subjects. The painted background centralizes the interest and forms a pleasing setting for the object lessons placed before it. The latter should be fairly obvious and the use of signs restricted to a minimum both for the sake of artistic effect and because facts grasped by the spectator without such aids to his mental processes are much more vivid. The picture and grouping should speak for themselves. Too much explanatory matter will kill the most effective exhibit. This is largely a matter of composition and especially of the elimination of superfluous details which are confusing-in short, simplification. Ignorance or disregard of this is the pitfall into which 9 out of 10 technical men fall, in arranging exhibits."

The city of Hemet, through her representatives, the Rev. Leak and the Secretary of the Chamber of Commerce, Mr. M. L. Rideout, have selected their location on the County Playground site near Idyllwild, and the laying out of the camp ground, road and other improvements will commence at an early date. Idyllwild, Inc., donated five acres of their land to the County for the purposes of the playground and about sixty acres have been provided on the National Forest adjoining, under Special Use permit.

Cleveland Bulletin.

District 6 - North Pacific District

The Malheur Lake bird reservation, in Harney County, Oregon, was set aside in 1908 by President Roosevelt as a breeding ground for wild birds. Since that time some question has arisen as to the jurisdiction of the State of Oregon over certain waters and unlocated school lands within the reservation. In order to settle this question of State jurisdiction, a measure was initiated during the past summer on which the people of Oregon voted on November 2. The measure proposed to transfer to the United States any possible State rights in the area concerned and provided at the same time a change of name of the reservation to the Roosevelt Bird Refuge. The measure was decisively voted down by the people of Oregon. This is not surprising, since there was the greatest possible confusion in the mind of the average individual as to the purpose of the measure as well as the facts concerning the refuge. Now that the people of Oregon have refused to transfer any rights which they may have in this reservation to the Federal Government, the status of the reservation apparently remains unchanged, since the Executive Order is still in force as far as Government lands within the reservation are concerned. The Oregon Chapter of the American Society of Engineers and the State Land Board led the opposition, and the Oregon Audubon Society and Roosevelt Bird Refuge Association worked for the measure.

District Engineer Philip H. Dater is back in Portland from Alaska, where he spent a month inspecting water-power sites from the viewpoint of their availability for pulp production and paper manufacture. He confirms the previous favorable reports concerning the possibilities for this industry in southeastern Alaska. Mr. Dater also inspected some of the road and trail work being constructed in cooperation with the Bureau of Public Roads. While on the "Tahn," Mr. Dater experienced what is supposed to have been one of the worst gales that ever raged off the Alaska coast.

Not a known loss from hemlock poisoning in 1920 on the Sisters-Metolius range of the Deschutes indicates the success of the recent efforts to eradicate the plant there, under the direction of Grazing Examiner Horton. Last year on this range there was a known loss of 18 head of cattle due to hemlock poisoning, and using this as a basis for the probable saving this year, the net profits of this work may be put at $680. The cost of eradication was $400, while the value of the 18 cattle which died last year from hemlock poisoning was $1080.

A camp fire built in a dangerous place by Mr. and Mrs. L. E. Mathews, of Seattle, was noted by Patrolman R. E. Strand, of the Wenatchee, who took down the number of their automobile. On returning to the camping place later, he discovered that the camp fire had been left burning. Using the license number as a clue, he started investigations, with the result that the campers' trail was traced by wire over the Cascade Mountains via Blewett Pass and east to North Platte, Nebraska, where the offenders were arrested and confessed. Being residents of Seattle, they will be tried either there or at Cashmere, Washington, where the warrant for their arrest was issued. They had been warned to put out the fire by Ranger Schaller and by Mr. Strand.

Two years ago, Ernest Mills, a sheep herder, trespassed on a ranger station on the Wallowa. A trespass case was prepared, and the owner settled for civil damages and an information was filed against the herder, who could not be found. This fall the trespasser returned and was spotted by Ranger Miller of the Whitman Forest. Mills was warned that the United States Marshal was looking for him and came to Portland and reported at the District Forester's office. He was taken to court and pleaded guilty. Since he had voluntarily given himself up, the minimum fine of $10 was imposed, which was paid; and the case is now closed - after two years.

District 7 - Eastern District

Not to be outdone by Alaska or any of the far western Forests, District 7 is undertaking to make known the possibilities for a paper plant on the Ocala Division of the Florida National Forest. It is said that on this District there are approximately 190,000 acres of spruce or sand pine from which it has been demonstrated that good kraft paper has been made. According to estimates of local Forest officers, an annual cut of 120,400 cords is possible and this amount will furnish an ample supply of our material for a 100-ton paper plant. The location of the Ocala Division is said to be especially well suited to a paper plant. Cheap water transportation is near at hand and railroad facilities are ample. Lime deposits are to be found in nearby counties, while talc and clay are also plentiful. The largest sulphur deposits in the country are just across the Gulf of Mexico in Texas and Louisiana, while the Alabama coal fields are not far distant.

The use by Y. M. C. A. and Boy Scout organizations of the Unaka-White Top Forest indicates that these organizations are quick to appreciate and take advantage of the recreational opportunities of the National Forests and that this form of use can be expected to increase.

The Johnson City local council of Boy Scouts of America has been issued a special-use permit for the development of a permanent camp site on the Carter Ranger District. The preliminary work was done early this spring and the camp site used by the Scouts during the spring and summer. The plans for the full development of the camp site are as yet tentative and the progress in development will be gradual, since funds can be secured only through contributions from time to time. Tents were used this summer and the mess hall was erected. The plan looks to the construction of separate troop houses and a general assembly hall.

The camp site is ideal, contains several acres of cleared land available for sports, is well watered by Miller Branch on which there is a site available for the construction of a swimming hole, although there is a natural swimming hole in Stoney Creek about one mile distant which has been used to date.

The boys and directors of the work are quite enthusiastic over this use of the National Forest. The Scout executive and some of the Scouts were present during the serious fire emergency in the spring and rendered assistance which gave decided indication of the possibility of considerable mutual benefit to be derived from this form of use and its incident cooperation.

The Boys' Work Department of the Bristol Y.M.C.A. has a camp-site permit on the Shady Ranger District in Josiah Creek about 1½ miles from Big Creek, Tennessee. A mess hall has been built and tents were used this season. A dam was also built on Josiah Creek affording an excellent swimming hole. The Directors of the work and the boys were all anthusiastic over the camp, and the report of the Director indicates that, whereas this season the use was largely by local boys only, the next season's use as indicated by applicationsreceived, will draw boys from a number of adjacent states, some coming from as far as the Middle West.

In response to inquiry and discussion of the possibility, plans have already taken a rather definite shape for the construction of shelters and side-camps in the mountains near these camps. There is miscellaneous rough lumber available from old logging camps which the boys under their Directors will use for the purpose of constructing these shelters, calling upon Forest Service employees for supervision and direction only.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

November 29) 1920.
December 6)

> "I have thought to emphasize the thought of reforestation because I think it highly essential for the United States of America ever to be thinking of self-reliance. We are so blessed with God's bounty, so varied in our productivity and so boundless in our resources, that the combination of American genius and a committal to conservation and cultivation will leave us independent of the resources of the activities of the remainder of the world." -- President-Elect Warren G. Harding on proposed new Federal forest conservation legislation.

Veterans

Captain J. B. Satterlee and Miss Lucy M. Strong, members of the Forester(s Office since the establishment of a Forest Service, retired on November 30. This completes a service of over 30 years for Captain Satterlee and 45 years for Miss Strong. They have been identified with the work of the Forest Service continuously since the enactment in 1897 of the first law providing for the administration of National Forest lands and have, therefore, taken an important part in formulating and carrying out the policies of the Service. The following extracts from letters of Mr. Sherman partly express the kindly regard and high esteem in which they are held by their associates:

Dear Miss Strong:

Twenty years ago the men in charge of the Forest Reserves, young, untrained, groping, learned that the letters bearing the initials "L.M.S." in their upper corner conveyed messages of calm confidence, of orderly procedure, of constructive suggestion, of stimulus and inspiration. Since that time all of us have come to know that a letter bearing your initials stands always for that which is good. Because of this your retirement from the Service will occasion a feeling of keen personal loss among the hundreds of present and former members of the Service whose privilege it has been to be associated with you in the years which have marked the development of the National Forests of the United States. ******* The record of your accomplishment in the pioneer stages of the movement stands out conspicuously as one of exceptional merit.

Dear Captain Satterlee:

The inexorable march of time brings inevitably to every man in the Government Service the hour when he must yield to other hands the burden of work and worry of official affairs. In your case, the arrival of this hour brings keen regret to the many who through their long association with you have developed for you a deep feeling of affectionate regard and high esteem. Your loyal adherence to high ideals of public service in times when the advocacy of such ideals demanded moral courage of a high order; your firm insistence upon consideration of the public interests in times when private interest made such insistence hazardous your scorn of deceit, unfaithfulness and dishonesty in public work all combine to create for you a record of service in public life which will not be forgotten for many years to come and of which you may well be proud.

To those of us who have worked with you the things for which you have stood and the things which you have accomplished have been sources of inspiration and encouragement.*******

The Forestry Movement Takes

The following extracts from a paper presented before the Rotary Club of Colorado Springs by Mr. Henry C. Graves, a prominent merchant of that city, come to us not only as an appreciation but as an encouragement. As a result of Mr. Graves' forceful arguments the forestry movement has been taken up by the Rotary Club along the lines suggested by the Forest Service.

"It is the wish of the Forest Service that its work may be brought to the attention of the thinking public. They prefer that publicity shall be voluntary and shall originate outside of the Service itself. Such information as the speaker possesses, he owes to Forest men, and to the many pleasant days he has spent with them in the open."

"Our civilization is largely a heritage from the past, the distilled knowledge of all time. It could not survive the exhaustion of a very few basic materials. We must safeguard these that there may be a future. Nature created for use, not abuse. In that exact proportion in which we waste, posterity must want. There is little hope for science. She does not create; she merely enables us to adapt and use the more rapidly; in time she must teach us to conserve the more carefully."

"In the morning when you look from your west window at our panorama of mountain contour (at least it is to be hoped you look at it every morning) the sight which meets your eye is not the one that greeted Pike. Beautiful now, it was thrice beautiful then, for it was an unbroken mantle of forest cover from tree line to timber line. During the past seventy-five years, the white man has disturbed the balance, and three-fourths of this timber has been burned. Without the supervision of the Service, its rangers and patrols, why is it not probable that the remaining fourth would disappear, leaving our boasted scenery an offense to the eye?"

"The supervision of the Service removes fear of more devastation in our region. The Forest will be conserved; in addition the most extensive replanting project in the country is under way now. During the past few years, over five million conifers have been planted on the watersheds of Colorado Springs and Manitou; this without cost to us. The work will continue until all the barren areas are covered."

"After a fire, the very humus is often burned from the soil, torrents of rain wash to bare gravel, and natural reseeding has little chance. As previously stated, our replanting has been carried on for a number of years. Earlier on the experimental stage, and latterly with remarkable and cheering success. Some of the trees are already six feet in height, others, planted on spots scoured by erosion, are still small but they are growing. The percentage of survival after the critical years have passed is ample to assure a positive and normal stand at maturity."

"The layman's comment upon viewing a replanted area of few years growth is: 'They are such little trees.' Surely they are; there must be little trees before there can be big trees. We may build a railroad, or a Panama Canal, but all this money could not create one tree. Only Time and Nature can do this, and Nature is lavish of Time."

"Remember this the next time you are out in the hills; use care with your matches, be sure they are out, then break them in two. Watch your camp fire, put plenty of water on it, and all around it. Before extinguishing it, you might burn your rubbish. If you carry tin cans or bottles into the woods, bury them. Your camp site should be left clean and primitive, only a small pile of dead ashes to mark the spot. Clean your camp for the other fellow's benefit. If this inducement should be insufficient, then do it to justify your self respect. If you have no self respect, for God's sake stay out of the Forest."

"We have heard rumors of the proposed 'Pike National Park.' Should this idea prevail, the land would be transferred to the Interior Department, and no more trees would be planted here. The energy spent on the Park plan might have secured for Colorado Springs the headquarters for the Pike National Forest."

"No paper would be complete should it fail to pay a tribute to those who are making the Service a reality. The Supervisors, Forest Examiners, and field experts are scientific men, practical men, else they would fail in their work. Pleasant, quiet, earnest men, with fine weather lines at the corners of their eyes. Their salaries are not commensurate to their loyalty or ability. If the compensations are not material, there must be other incentive. Their point of view is different from ours; they are distracted less by the complexities and artificialities of town life; they are much in the open, much alone, hence think close to fundamentals. They are doing something definite; no need that they should know those moments when we ponder the futility of life. The most of us serve only that generation in which we live; we go and leave no mark. It is given to but the fortunate few to build anything which will endure. Perhaps an invention, an idea, or a bar of music, something fine enough to resist the acid of time."

"The forests, planted and conserved, will be here when the forester has gone, and the ideal he builds will march on down through the years. Perhaps something of this constructive inspiration tends to keep the best of them in the Service. This, an appreciation of beauty, and a love of the open, are the only things that would."

"It is good to meet the Forest men, to see them on the street and talk with them. Better still, to know them at their work, to be with them in field or camp, to sit with them through the long twilight when their day's work is done, to hear the rasp of a match on a hob-nailed heel, and to smell the fragrance of a well-cured pipe, to listen to the broken bits of talk, to the wind in the forest, and to the silence; to watch with them as the afterglow fades from the West, and the purples slowly deepen into black. From above the ragged skyline of mountain and spruce, one by one the stars look down upon these men who strive unselfishly that you and I may know beauty, and that posterity may not want."

California Lumbermen and the Forest Program

At an open meeting of the California State Board of Forestry in San Francisco on November 5, Dr. Geo. Pardee, Chairman, made it clear to the lumbermen that the State of California expected to take effective action looking toward the checking of forest devastation on private holdings in this State. Particular emphasis was laid upon the necessity for an adequate system of slash disposal in connection with private cuttings.

Mr. C. Stowell Smith, of the California Sugar and White Pine Manufacturers Association, presented the essential features of the Capper bill, while District Forester Redington outlined the Greeley forestry program as incorporated in a bill formulated by the Secretary of the American Pulp and Paper Association, and approved by representatives of that Association, the National Lumber Manufacturers Association, American Newspaper Publishers Association, U. S. Chamber of Commerce, and the American Forestry Association.

State Forester Homans spoke of the necessity for slash disposal, and the acquisition of cut-over lands by the State of California. He stated that it was not the intention of the State Board of Forestry to ask for additional legislation, since they feel that the present slash disposal law should be sufficient to secure the abatement of this nuisance. The State Board of Forestry does not, said Homans, at present wish to issue definite instructions regarding slash disposal. It is their desire that each lumberman should dispose of his slash in what he considers the most satisfactory way. The State Board will then study the work done and as a result of the information collected will later on issue standard instructions for various types and situations.

Each lumberman present was asked whether or not he would undertake to dispose of his slash in the future, and with two exceptions all replied in the affirmative. The representatives of two companies wished to refer the matter to their Board of Directors.

The lumbermen also endorsed State Forester Homans' proposal to request $100,000 from the coming session of the Legislature for the acquisition of cut-over lands.

An Even Race and No Favorites

The statement of receipts for the first four months of the fiscal year shows that District 5 holds the banner on two items, Timber Sales and Special Use, as well as on the total of District Receipts; District 6 is a close second on both the counts and also on the total; District 1 has the greatest percentage of increase over the same period last year (22 per cent); and each of the other four Districts leads in one item: District 2, in Water Power; District 3, Grazing of cattle and horses; District 4, Grazing of sheep and goats; and District 7, Turpentine Sales.

The total receipts for the four-month period show an increase of $57,967, or 7 per cent, over the same period last year. Decreases occurred only in Water Power Receipts and returns from Trespass (Grazing, Fires, and Property).

Lots of Hay and No Cattle to Feed It To

The Bureau of Markets has very kindly undertaken to help out our permittees in the Southwest, many of whom have cattle on their hands for which there is apparently no market, by getting them in touch with farmers in other States who have the feed but no cattle. Among other letters which have been received by the Bureau of Markets and forwarded to the Forester for his information is one from Mr. J. E. McNally of Schuyler, Nebraska. The important part of Mr. McNally's letter is as follows:

"I have a 2400-acre ranch, in Holt County, Nebraska, 16 miles south of Atkinson, with 3000 tons of the very choisest prairie, red clover, and timothy hay, with nothing to feed it to, and will sell it very cheap or take cattle to winter. There is plenty of feed, shelter, sheds and water for 1500 head of cattle, and in fact there has been that many wintered there during the past winters that were shipped in from Oklahoma, Texas, Wyoming, etc., but so far this year have none, and this is very good feed. Cattle do exceptionally well on it on account of so much tame hay. I think there was hardly any loss, only 4 out of 1500 head last winter, I believe. I have this place leased to a man who has plenty of help to handle that many cattle, and the hay can be bought very cheap, or will winter the cattle very reasonable, as it is a big job to bale and haul this hay, and the market is so low it hardly justifies it; and am very anxious to get in touch with some one who can use this feed or a part of it, and will appreciate it very much if you can put me in touch with some such people."

--W. C. BARNES.

In this connection, the Daily Bulletin of the Southwestern District, under date of November 17, contains the following:

"I sent you a day or two ago copies of letters regarding feeding of cattle received from several Nebraska County Agents. Last night I had a long distance call from Mr. Lancaster of Holt County, one of these agents. He emphasized the fact that they have a very large amount of feed available and very little money with which to purchase cattle. They could certainly handle 40 or 50 thousand head in that one county. They prefer to have the cattle shipped in and owned by the shipper. They are very anxious for further information concerning the Arizona and New Mexico cattle.

"There is probably surplus feed enough to run three or four thousand head of cattle. The majority of the men who have feed would probably wish to run cattle at so much a head for, as you know, on prairie hay alone it is very small gain a critter will make during the winter months. There are thousands of tons of hay that can be purchased from three to five dollars a ton with the feeding privileges. If they could send some one there we could help them get the feed or I can send you a list of men who would have feed to sell.

"Your letter received regarding the cattle in the south and the desire for hay. We have large quantities of hay here that is away from the railroad. We have good flowing wells in this district and good shelter. Men would take the cattle and winter them here or they would let men come in and winter cattle themselves. We could easily handle twenty or thirty thousand head that way and at a very reasonable price. It would pay the men there to send a committee here to look the proposition over as the men here are very anxious to sell their hay or get cattle to winter. I could get the men together here on short notice and line up the places and the number of head they could handle."

Forest Service Exhibit for San Francisco School Children

Through the courtesy of the Public Library Board an educational exhibit, under the direction of Mr. Paul J. Fair of the Forest Service, will be held in the Children's Hour Room, Public Library, Civic Center, San Francisco, from November 29 to December 10, 1920.

This exhibit is being installed in order that teachers and school children may obtain a visual conception of the resources of the 18 million acres of National Forests in California, their value, their intimate relation to the political and economic life of the people of State and Nation, the ways in which they are and may be used, and how they are administered and protected.

A typical mountain camp, with painted background (of Mt. Shasta) 10 x 20 feet in size, built-up foreground including live trees, will form the main setting and will show the safe method of building a camp fire. Small group models, exquisitely done, depict sheep grazing, wild life, and other features on the National Forests. A coyote family, mounted, will be in evidence. Photographs and tools and equipment, mounted and catalogued, will depict various activities and illustrate the uses and methods of conserving such resources as forage, timber, water power, recreation facilities, etc.

In addition, the Western Department, Air Service, will install equipment illustrating the importance and efficiency of airplane fire patrol in the big problem of protecting the National Forests from fire. Various types of airplane engines, maps and equipment used in aerial fire patrol, wireless apparatus, etc., will be shown.

The Board of Education has arranged definite hours for all teachers and pupils of sixth, seventh, and eighth grades to visit the exhibit.

The John Day Fence

Fence maintenance in regions of heavy snowfall of the Western Forests has been pretty much of a problem. Various types of fences have been tried out and with few exceptions have failed under six to thirty feet of snow. Every spring, on most western Forests, the cattle are on the "flats" before the rangers or guards reach the high places to do the repair jobs. The Whitman Forest has escaped this "bugbear."

Years ago, former Supervisor Henry Ireland recognized, in a pole fence commonly used in the John Day Valley, a desirable type of construction. He improved somewhat the design in fences which, under his direction, were later built on the Whitman. His creation is not a thing of beauty or of symmetrical proportions; it is noted rather for rugged durability--as rugged as old John Day, The Scout himself, from whom the fence drew its title, "The John Day Fence."

Space will not permit the giving of specifications in detail; however, the fence is nailless, stapleless, post-holeless, and postless. It is all above ground and it is judged to be free and above-board in all its arguments with Mother Nature and breachy cows, both of the lady and gentleman variety. Lodgepole or any other kind of poles may be used for runners, and since it is all above ground the question of selection of wood for posts does not enter into the specifications. Any native wood may be set up for the supporting members.

What does the fence cost? Mr. Ireland wrote on January 9, 1916, "The original cost of the fence exceeds that of an ordinary four-wire fence." He went on to say that the superior durability of the fence over wire would prove cheaper in the long run. The figures of maintenance cost in Whitman files justify that opinion. I can't vouch for the correctness of the bookkeeping, but Supervisor Evans does. He can guarantee also the fences named to be in good condition. I can guarantee that those I saw are up, and up in good shape.

The figures are significant of something more than local condition. Can't the experience of the Whitman be profitably applied pretty widely on other National Forests of the West?

A line to me from interested Districts will bring a blueprint and specifications of the "fence."

--E. W. KELLEY.

The Output of Articles for October and November

The Progress of Purchase of Eastern National Forests.--Prepared by The National Forest Reservation Commission. W. W. Ashe, Secretary.

The Production of American Storax (Sweet Gum) from the Red Gum Tree (Liquidamber stryraciflua), By S. A. Mahood, Southern Trade Journals.

Suggestions for Rating Risks in Forest Insurance. W. N. Sparhawk, Journal of Forestry.

The Outlook for Extending American Lumber Trade in Italy. By Raphael Zon. Journal of Forestry.

Relative Durability of Different Woods. Geo. M. Hunt--Lumber.

The Standard Wood Preservative. " " " "

Pointers for Creosoters. " " " "

Preserving Wood by Pressure. " " " "

Discussing Wood Preservation. " " " "

Selecting the Wood for Treatment. " " " "

Creosoting Without Pressure. " " " "

Simple Creosoting Apparatus. " " " "

Is American Chestnut Developing Immunity to Blight? By E. R. Hodson. Technical Magazine.

Mechanical Properties of Western Tie Species. P. R. Hicks. Engineering Magazine.

Durability of Western Tie Timber. P. R. Hicks, Engineering Magazine.

Coordination in a Research Laboratory. C. V. Maudlin. Engineering Magazines.

The Error or Probability Curve. Kenneth Scott. Some Technical magazine.

Pulp Evaluation as Affected by the Fiber Ratio in the Test Sheets. By C. L. Bachelder. Paper Trade Journals.

The Windfall Problem in the Klamath Mountains, Ore., R. H. Weidman, Journal of Forestry.

Forest Conservation by Better Utilization.--O. M. Butler, Journal of Forestry.

New Million-Pound Testing Machine for Research Work to Aid Engineers. L. J. Markwardt. Engineers' News Record.

Book Paper from Southern Pines and Gums. By S. D. Wells. Paper Trade Journals.

Knock on Wood. By L. C. Everard. Farm & Home.

A Subterranean Side Trip. Jas. R. Scott & Graham S. Quate. Publication undecided.

Ecological Studies in the Tension Zone Between Prairie and Woodland. Journal of Forestry. C. F. Korstian.

Standardization of Lumber Sizes and Grades. By David G. White. Some magazine or paper to be selected.

The Production of Crude Gum by the Pine Tree. Eloise Gerry. Naval Stores--History, Production, Distribution and Consumption.

The Output of Articles for October and November (Continued)

The Properties and Uses of the Typical Moisture - Time Curve of Wood and Other Substances under Constant Temperature and Humidity Conditions. Kenneth Scott. Wisconsin Engineer.

Experiments with Butt Treated Poles in California. P. R. Hicks, American Wood Preservers' Association.

A Timber Survey: What it Should Be. By Earle H. Clapp, Lumber.

A New National Playground. By E. W. Tinker. Outers' Recreation.

Government Industrial Research Service. By C. R. Thomas. Some magazine of general interest.

The National Forest Resources of Alaska. By John D. Guthrie, American Forestry.

The Glacier Highway in Alaska. By John D. Guthrie, American Forestry.

Substituting Wood-Using Facts for Wood-Using Lore. By O. M. Butler. Dodge Idea.

What is Wrong with Alaska. By W. B. Greeley. Some periodical of National circulation.

The Lookout Man. By Carl B. Neale. Sunset, Outers' Recreation.

Another Set of Pros and Cons

The following letter from the Fort Valley Experiment Station to the Weekly Bulletin speaks for itself:

Mr. Norcross, writing in the Weekly Bulletin for October 11, expresses a strong disapprobation of what he is pleased to call a "heterogeneous assortment of Forest Service buildings" seen on a recent field trip. Well, why not?! Why should we have the "standardized buildings" that he pleads for?

There seems to be an idea in the minds of some members of Congress that it is part of the ROMANCE of a forester's work to live in poorly-made or unfinished quarters. Perhaps some of them have spent a day or two or possibly a week at a Ranger Station and gone back to Washington thrilled to the core with the picturesqueness of it all. Even if the kitchen chimney did leak when it rained that was only part of the fun. There is strong reason for suspecting that Congressmen are not the only ones who make the mistake of looking upon the field men as year-long vacationists!

In the Army we find standardization carried to an extreme. All the men are dressed alike. The cots are the same. The meals are the same. All are made to keep step, etc. Undoubtedly it is considerable satisfaction to the Colonel to have things all looking so smart and uniform. One is even said to have wanted the slide trombones to move in unison. But does it make for a contented rank and file? (Incidentally, the Colonel's quarters and food are not the same as the men's). There are some of us who are trying to forget the Army.

I know of a coal town in Kentucky where the dwellings are standardized. They are mostly painted gray. There is a great deal of gray weather, too; and huge refuse piles of gray clay from the middle of the coal seam. Altogether, it is a pretty good place to get away from. But to add to the utter dreariness the Company has standardized building plans. There are three-room houses and five-room houses and seven-room houses. The three-room houses are all alike; similarly the five-room. In the case of some of the officer's quarters an effort is made to have different colors, and occasionally different gables; but inside they are all the same, according to their size. I have sometimes wondered if the Company ever realized that here was one big cause of their huge labor turnover; "purely psychological," perhaps, but none the less potent.

Another Set of Pros and Cons (Continued)

There may be a definite advantage in being able to find one's way with unerring accuracy about a previously unvisited Forest Service building, knowing just how to avoid stepping into the kindling-box, or sitting on the cat, or kicking over the fire-extinguisher--there *may* be, I say, but I don't know just what it is. How would Mr. Norcross himself like to be required to occupy one of his Standardized Buildings year in and year out? And ------ have they taken into consultation in this matter Mrs. Norcross, and Mrs. Bonner, and Mrs. Headley (if they are so fortunate as to be in a position to do so)? Would *they* be content with Standardized Houses? If not, why should it be expected of the field force?

"Fabricated Buildings" have their good points. The mail order houses can advance any number of arguments in their favor. But as for eliminating our "heterogeneous assortment" *would* Standardized Plans be an unmixed blessing!

--FERDINAND W. HAASIS.

"The Gentleman is Out of Order"

A Parable in One Canto

(**Time.** Nine-thirty A. M.
(
(**Place.** An office room, 930 F Street, N. W.
(
(**Players.** Forest Examiners No. 1, No. 2, No. 3, and No. 4.
(Miss Tappitt, stenographer to No. 1.
SS (**Discovered.** Official No. 1 at his desk. Business of writing.
(Enter Official No. 2, bearing map. (speaks).

No. 2. "Good morning, Jack! Got time to talk over the Umpty-Ump case? Like to get your opinion."

No. 1. "Sure thing. Come in and sit down. We must finish that to-day."

(They enter into conversation, and in ten minutes have reached the
(deciding point, when -
SS (Enter. Official No. 3, amiable expression, letter in hand, (speaks)

No. 3. "Gentlemen, may I interrupt just *one* minute? This affair is mighty important, and I know you have a long talk ahead." (spreads letter before No. 1.)

No. 1. "Er - certainly, never too busy to listen to you."

No. 2. (Politely) "Of course." (lights cigarette)

(No. 3, and No. 1 eagerly discuss new question, and in ten minutes
(have nearly completed the decision. No. 2 leans forward and picks
SS. (up map to resume previous conversation, when -
(
(Enter Official No. 4, in high gear, brandishing telegram (speaks)

No. 4. "Excuse me, boys. Have to butt in. Rush case - revision of Regulation 999Q. Won't take but a minute," etc. (spreads telegram before No. 1.)

(No. 2. mumbles, relinquishes map, and casts surreptitious
(glance upon his watch. No. 3 takes seat and examines finger-
(nails. No. 4 engages No. 1 in earnest conversation. (tele-
SS (phone demands attention two minutes) and presently arrives
((telephone rings again) at the point of the discussion.
(No. 3 and No. 2 look up with bright, hopeful expression and
(edge forward, When -

Enter stenographer (speaks)

"Pardon the interruption Mr. One. Have you forgotten your appointment at the Bureau of Orinthology?"

(No. 1 jumps up)

"By George, yes, Miss Tappitt! Excuse me, fellows. Pressing engagement. Extermination of lulu-bird on the Chugach. Gotta beat it."

(Diving into coat and hat - the others exclaim in chorus:

No. 2. "How many acres."

SS No. 3. "Let's recommend ten thous -"

No. 4. "I'll wire the District -"

No. 1. "Sorry, can't do it now. See you later. G'bye!"

No. 1. vanishes down the corridor. No. 2, No. 3 and No. 4 regard each other without enthusiasm, and silently fade away.

Miss Tappitt (Powdering nose)

"If I were only a man! It must be wonderful to decide things as rapidly as they do.
Phew! What nasty tobacco!"

The clock strikes ten.

New Paper Pulp Industry in Argentina

The first factory in Argentina to make paper pulp was to begin operations during September. The mill, which is located near Barranqueras, in the Chaco Territory, on the Parana River, is using as raw products a species of bog grass called "paja brava." This grass grows during the whole year, and is so abundant in the swampy places that it has been considered a nuisance.

At present the mill is equipped to make only pulp in sheets and strawboard for paper boxes. It has a capacity of 3 tons of strawboard per day. The construction of the mill was begun over two years ago during the war. The owners are German-Argentine and the engineer in charge is an Austrian. The equipment consists of old machinery rebuilt with some machines which were made in the country. It is intended later to increase the equipment in order to manufacture a finer quality of pulp and to obtain a greater production.

There is undoubtedly a good field for a more elaborate wood-pulp mill in the north of Argentina (see Trade Note in Commerce Reports for May 5, 1920), since an abundance of trees and plants suitable for paper making exist in that region and there is a market for the product in Argentina. This industry would be worth investigation by American capital.

--From "COMMERCE REPORTS," Nov.19, 1920.

Depletion of Basswood

According to a report by Research factories using large amounts of basswood report that, particularly since the war, they are having serious difficulties in securing sufficient amounts for their needs and especially of the higher grades.

Basswood is valuable principally on account of its white, clean appearance, because it is light in weight, works well with tools, is strong for its weight, bends without breaking readily, and takes paint exceedingly well. Box makers like basswood for its good appearance. It is particularly valuable for provision boxes because it does not taint the food in contact with it, and for trunk boxes because of its light weight. Trunk manufacturers in general claim that they are dependent on basswood for this use, since even the fiber trunk should have one or more inner wood plies. Basswood is also much used for pails and tubs, especially for candy pails, not only because its light weight results in lower freight charges in shipment, but also because of the light color of the wood which allows stenciling and because of the odorless quality of the wood. Very large quantities of basswood are used for these products. A special use of basswood is for bee-keepers' supplies, particularly for the honey sections to hold the comb honey. Much honey is sold in the comb because of the fear of customers of adulteration of the extracted or "strained" honey. Customers demand a white, clean-appearing wood for holding the honey, and basswood seems to be the only wood available because it must be bent to form the square piece and other desirable woods will break when bent. For this use only the high grade, white, clear wood will suffice, whereas, for other basswood products already mentioned, brown, discolored, and slightly defective wood can be used. Special high-grade basswood stock is also required for saddles and for piano keys.

The present scarcity of high-grade basswood is due largely to the depletion of these stocks by the demands of the Government during the war, principally for saddle-trees. Moreover, there has been an increased scarcity of basswood for the past five or ten years on account of its being cut out in regions where in former years large amounts were available. Basswood was formerly plentiful in Ohio and Indiana. The box factories and planing mills in these states now report that whereas ten years ago large amounts were obtainable from within their own State, there is little available at the present time and supplies must be shipped from such distances that freight costs make the wood too expensive. They are, therefore, substituting other woods, mainly yellow poplar from West Virginia. Up to five or ten years ago there were large amounts of basswood timber throughout Wisconsin and Michigan and many woodenware factories making candy pails and tubs, which must depend on local supplies of basswood timber, were located there. These factories, situated in the southern half of these two States, have during the past few years been compelled to go out of business or move farther north. The main basswood supply is now located in extreme northern Michigan and Wisconsin. There is also a comparatively large supply of basswood in West Virginia, but this timber is said to run not so white and clear as that from the north, hence is not so suitable for the highest grade of uses.

Firms requiring a high grade of basswood are limiting its use more and more to those products for which other woods can not be substituted. On the other hand these firms find that the price of the Firsts and Seconds grade is so high that it is more economical for them to buy log-run and utilize the lower grade stock for other products. For instance, one Ohio firm reports that Firsts and Seconds basswood of the quality it requires has been costing about $170 per M board feet, while the log-run can be obtained for from $75 to $80. This indicates a great demand for the highest grade stock. Firms requiring a large and cheap supply of basswood timber realize that they must either go out of business before many years or use some other timber. One of the largest firms in Wisconsin making pails and tubs has acquired a large tract of timber on the Pacific Coast to which it will move in a few years and make its products of softwoods.

"Popple" is now used to a limited extent in place of basswood for candy pails, and small firms will probably get sufficient supplies of popple and basswood in northern Michigan, Wisconsin, and Minnesota, to keep in operation for many years. The present large use of basswood must, however, be even more greatly curtailed in the near future as the regions of original growth become more restricted. Second-growth basswood timber is said to yield a comparatively high proportion of the best gade of stock. Since basswood trees grow rapidly and small diameters can be utilized, growing this timber for special uses seems to be a promising field.

Washington Note.

Several photographs have just come in to the Washington Office showing the Forest Service exhibit at the Fresno Fair. Judging by the pictures the exhibit was a humdinger and District 5 is to be congratulated.

Hutchinson Transferred

A telegram has been received from the Forester requesting the transfer of Wallace I. Hutchinson to the Washington Office. While this gives Mr. Hutchinson a position with greater opportunities in a broader field of endeavor, it leaves with us a vacancy which it will be very difficult to fill.

The importance of the Office of Public Relations in this District has increased wonderfully in the last few years and plans are under way to broaden and more clearly define its scope. Mr. Hutchinson has very largely made the office what it is now and, because of his knowledge of the District and of the people with whom we deal, he is almost invaluable to us. While we are glad for his opportunity, his going will be felt and regretted by every officer in the District.

--A. S. PECK.

Rancher Threatens Life of Forest Ranger

Because he threatened to burn a ranger station and to kill a forest ranger, J. L. Anderson, a rancher of Riland, Colorado, is in the county jail at Glenwood Springs, Colorado. He was placed under arrest by Felix E. Read, the ranger whose life he threatened, after he had been disarmed of a shotgun by the employees of a small sawmill near the station. Anderson is caretaker of a ranch owned by Mr. Paul Gregg who was to furnish some hay to Ranger Read. Read was entirely out of feed and had requested Anderson on more than one occasion to haul some hay over to the station for the use of his saddle horse, but Anderson had always turned him off with an unsatisfactory answer. This time Read had insisted on a definite reply and the rancher flew into a sudden rage, leaped from his seat on the wagon, and announced that he was coming back to take Read's life. He was on his way back with the gun when the sawmill employees intercepted him and took his gun away. Anderson had made a previous threat that he was going to touch a match to the station buildings and burn Read out on account of Read's efforts to secure observation of the game laws in that vicinity. Read stated that he had never had any trouble with Anderson in any way regarding the observation of the game laws or any other matter heretofore. The prisoner is believed to be mentally unbalanced.

Trapping Beaver on the Cochetopa

Under a cooperative plan between the State Game and Fish Department and the U. S. Forest Service, Commissioner R. G. Parvin sent a special trapper to the Cochetopa National Forest to catch beaver which were damming streams and flooding farmlands. The plan also called for transplanting trapped beaver which were not seriously hurt to streams where they would not be likely to do damage. Although there are over 12,000 beaver on the Cochetopa Forest, there are still many streams which they have not worked. In one month the trapper caught 132 beaver of which one pair were taken to another stream. The fur value of the 130 killed is $20 per hide, or $2,600. This goes to the State Fish & Game Department. At present prices, the beaver in Colorado are worth at least $240,000 for their hides and millions for the protection against floods which they furnish. The experiment which was carried on may lead to a plan whereby the increase may be trapped each year and the proceeds added to the income of the State Fish & Game Department.

Fur-Bearers vs. Game Birds

Under our cooperative agreement with the Game & Fish Department of the State of Wyoming, no trapping permits are issued by the State without referring them to the local Forest Supervisor. The Forest Service had in mind, in this agreement, that our fur-bearers may be made an important resource of the Forests and that some better control should be exercised in issuing permits with a view to confining them to areas where there will be no danger of depleting the supply. The liberal policy of issuing permits by the State Warden seems to indicate that he regards the presence of the small fur bearers, such as marten, mink, etc., as one of the greatest menaces to grouse and other birds and that, therefore, permits should be issued almost without restriction until these animals are cleaned up. We are inclined to the view that too much destruction is charged to these animals, and it is hoped that some agreement can be reached whereby the Game Department will take a similar view of the question.

Hard Times for Sheepman

On November 15, a meeting of the Carbon County Wool Growers' Association was held at Rawlins, Wyoming. The Supervisors of the Forests used by members of this Association attended the meeting and presented some constructive plans which had for their purpose the lessening of damage on certain of the ranges; but, after hearing the condition of the sheep and wool industry presented, it was decided that these plans could very well be deferred for the coming season. The cashiers of the different banks were present at the meeting and reported that the condition of the industry at this time would almost bring tears to the eyes of a wooden man. There has been no market for the old ewes which are usually shipped each fall; in fact, there has been no market except on lambs, and sheepmen have turned everything in the way of lambs to raise funds, keeping these old ewes, which would not bring an average of $4 per head, over another season in the hope that something may be realized from them another year. Of course there is danger of heavy mortality in this class of sheep during winter. The banks have advanced money on wool and now the sheepmen find themselves in the predicament of having to return a portion of those funds with no means of borrowing the money, the banks being loaned out practically to the last dollar. As one sheepman said "I believe it will be all right if we can hold on, but it surely cramps a fellow's hands to hold on."

District 3 - Southwestern District

The Coconino has something to talk about. Here it is:

"The total receipts from all sources on the Coconino, including State and privately-owned timber handled by the Forest Service, amount to $213,421. This is nearly double our nearest competing forest in the United States, the Plumas, which shows $121,499, or nearly three times the amount of our nearest competitor in D-3. Our total timber sales receipts for timber handled on this Forest, including State and privately-owned timber, is $138,295, or in round numbers $33,000 over our nearest competitor in the United States, the Coeur D'Alene. The total amount of timber handled by the Coconino during the fiscal year 1920 was 45,773,000. This amount is 4,000,000 feet in excess of our nearest competitor in the United States, the Tongass Forest. The average price per thousand is $3.02. This is 53¢ above the average price for any district in the Western States and 58¢ above the average price in D-3.

"These figures are representative of the actual forest business of the Coconino Forest, and means that the Coconino stands first in everything with a good, heavy margin between it and its nearest competitor in the United States."

An unusual condition existed on District #7 this year; Ranger Lindsay reports that as a result of showers which occurred almost every week during the grazing season on his District, some bands of sheep went as long as sixty days without water other than that supplied in the wet forage.

--Cache Register.

IT CANNOT BE DONE

There are thousands to tell you it cannot be done.
    There are thousands to prophesy failure;
There are thousands to point out to you, one by one,
    The dangers that wait to assail you,
But just buckle right in with a bit of a grin,
    Then take off your coat and go to it,
Just start in to sing as you tackle the thing
    That cannot be done and you'll do it!

--N. Y. Tribune.

Some recent figures on the probable comparative cost per year of telephone line vs. wireless telephones, in connection with a sample case on the Crook, might be of general interest. The two points to be brought into communication are 40 miles apart. We figure that a pole line would cost about $8000 to construct and $100 per year to maintain. Wireless would probably cost $2000 to install and $100 per year to maintain. This gives the wireless a clear lead, on paper. But there are many other points bearing on comparative usefulness, such as ease of extension, dependability, intermediate connections, signaling, etc.

District 4 - Intermountain District

Lookout Disregards Union Hours

The fire record made by Charles Bunker, Lookout on Scott Mountain on the Payette Forest, during the past season indicates very strongly that two things are true, at least under similar conditions. One is that a lookout having combined living quarters and observatory located on the lookout point is more efficient than one who lives at some distance from the point and spends only a small part of the twenty-four hours on actual lookout duty. The second is that it is possible for a lookout to detect and locate fires after dark.

Lookout Bunker is credited with first discovery of and report on thirteen fires. This, of course, was not the sole result he secured, as he reported or gave readings on several other fires for which he was not given credit for discovery. All but one of his fires were extinguished before reaching Class C proportions; and this one was put under control as a Class B fire, but escaped while being patrolled by one man, the rest of the crew having gone on to another fire.

The hours of discovery are given below:

One at 6 A. M.
" " 7 " "
" " 11 " "
" " 2 " "
" " 3 " "
" " 5:30 P. M.
" " 7 " "
Three at 9 P. M.
One " 10 P. M.
Two " 11 P. M.

Another lookout on the same Forest who lived in a cabin at some distance from the lookout point discovered eleven fires as given by hours below.

One at 8 A. M.
" "10 A. M.
Three at 11 A. M.
Two " 12 M.
" " 5 P. M.
" " 6 P. M.

Nine out of thirteen of Bunker's fires were thus discovered outside of the hours during which a point is usually occupied if the lookout has quarters separate from his observatory. Seven of the fires would not have been detected until the following day under the latter system.

The Scott Mountain lookout is a combination building 12 feet by 12 feet, with the instrument on the second deck. Wood is readily available, but water is packed about one-fourth of a mile. One five-gallon bag is sufficient for a day's use. This is Bunker's second year on Scott Mountain, which is beginning to be known as "Bunker Hill." Its elevation is 8,500 feet.

Thunder Mountain Fires in 1920

Eighteen fires occurred during the summer of 1920 on the Thunder Mountain addition of more than a million acres of undeveloped forest land where several hundred men were engaged in fire suppression during the summer of 1919 under the direction of the General Land Office. Eleven of this season's fires were Class A, four Class B, and three Class C. Twelve were started by lightning, and six were of human origin. Eight were discovered by temporary guards, seven by District Rangers, two by lookouts, and one by a settler. This is the first year the area has been under administration. The men were unfamiliar with the country. They had no telephones and almost no trails. No lookout points had been selected or improved, and the only method of detection was by patrol. The settlers and travelers were not as familiar with Service rules for prevention of fires as on areas which have been administered for a number of years. In view of the many handicaps under which the Forest Officers were working the fire record stands out as a really remarkable one.

District 4 - Intermountain District (Continued)

Assistant Supervisor Riddle and Supervisor Blakeslee have met with the advisory boards of all recognized associations on Districts Nos. 7, 8, 9 and 10, with the exception of Payson. The meetings were held for the purpose of discussing matters relative to trespass, range protection reductions, tagging, etc., which will be considered in our grazing plans containing recommendations for the 1921 season's use of the range. As a result of our conferences with the advisory boards, some very interesting statements were secured from the board members relative to the tagging program which was in effect on the Nebo Division during the past season. It was interesting to note the variation in results obtained as viewed by different members of the same board. For instance, at one of our meetings a very influential board member made the statement that two out of every five head of his permitted cattle that had been tagged, when gathered from the range had not only lost the tag during the season but had lost the hog ring as well, and that it was an impossibility to determine by a close inspection of the critter's ear that it had ever been tagged;--that no scar was left to show where the tag had been. Another member of the same board made the statement that out of some forty head of his cattle tagged at the opening of the season, only three head were gathered which had lost the dangle and that each of these three still had the hog ring in its ears. Other members of the board stated that their observations had shown that where the hog ring had been pulled out of the ear, a slit would be left and that it was not at all difficult to determine whether or not they had been tagged. The associations generally felt that a lot has been accomplished through tagging during the past season, and that they have been well repaid for the small investment of funds that was necessary for them to make to comply with the tagging rule. Some of the boards have not hesitated to say that in their opinion at least fifty per cent of excess stock which have formerly been using National Forest range without permits were eliminated during the past season. The majority of the boards feel that tagging should be continued but that the dangle tag which was used during the past season is unsatisfactory, and that a more suitable tag should be adopted.

--Uinta Digest.

We regret to announce the resignation of Ranger Albert Gunther. Mr. Gunther entered the Service in 1909 and has served continuously on the Teton. His work has been uniformly good, his standing in the community excellent and the Service, especially the Teton, will miss him. The past two years he has been engaged on improvement work; and two bridges across the Gros Ventre River, the new road across the "slide" and the Teton-Bridger drift fence, will remain for a long time as visible evidence of his industry and efficiency.

--Teton News Letter.

District 5 - California District

District Forester Redington has returned from a 15-day trip to the Inyo, Cleveland, Angeles and Santa Barbara.

While on the Angeles he went over the Arroyo Seco and San Gabriel road projects with Charlton, Allen, and Dort, and in San Gabriel Canon saw one of the neatest and best improved public camps in the District. The improvement and good condition of this camp is largely the work of Guard Franklin.

Transporting Fish

This table will indicate the number of cans necessary to transport a given number of fish at any season. Five-gallon cans are more convenient than the larger size when it is necessary to pack them on a horse.

Fish per 10-gallon can

		Advanced	Fingerlings			
Species	Fry	fry	#1	#2	#3	#4
Eastern Brook	5,000	3,000	1,500	500	250	100
Blackspotted	5,000	3,000	1,500	500	250	100
Rainbow	5,000	1,500	1,200	600	200	125
Mackinaw	4,000	3,000	1,500	500	200	100
Steelhead	2,000	1,000	800	400	150	100
Landlocked salmon	2,000	1,000	600	400	150	100

Transporting Fish (Continued)

Fry: Up to time yolk sack is absorbed and feeding begins.
Advanced Fry: From end of fry stage to 1" in length.
Fingerlings: From 1" in length up to 1 year old.
Classed as #1 from 1" to 2"; #2 from 2" to 3";#3 from 3" to 4", etc.

During the season 1918-19 the largest but not the only fruit shipping exchange in California used nearly 15,000,000 wooden boxes for shipping oranges lemons, and grape fruit. These boxes required 135,000,000 feet of lumber. Other fruit shipping firms in the state doubtless doubled this amount. The enormous demand for lumber for box shooksis having the inevitable result of raising the cost per box. To insure a sufficient supply of box material and to keep the cost per box as low as possible, the various cooperative fruit associations of California are buying their own timber tracts, erecting their own sawmills, and planning to make their own boxes. Not many months ago a big fruit growers concern spent more than a million dollars in the purchase of 30,000 acres of timberland. It is now erecting a mill having an annual capacity of 800 carloads of boxes, the box shooks being made from the lower grades of lumber cut.

The following offer from a public spirited old lady of Santa Barbara is the kind we would like to receive from a number of other localities:

"Realizing how restricted camping has become, I obtained this 40-acres with 8 springs, oak and laurel timber for my summer camps as all my life have been a camper every summer. Now I see how well the Government camps are administered....and I would transfer this to be a free camp ground for the people under Government control."

Fifty-four responses to Circular "P. Special Reading Course" of October 10 have been received up to November 15. Supervisors, Deputies, Grazing and Forest Examiners, Rangers and the wives, all are represented. The most popular subjects, in order of popularity (and with the number of applicants for each subject shown in parenthesis are:--Engineering (19), Forestry (15), Animal Husbandry (14), Agriculture (13), Home Economics (13), California (9), Poetry (9) and Trades (9). Entomology is the only one of the twenty subjects listed for which there has been no call. The average application asks for 3 main subjects.

Put Yourself in the Place of the Tourist

As you ride your district cleaning up your fall work, are you keeping your eye and senses peeled for the possible location of one more trail or road sign? Put yourself in the place of a tourist or a new Forest Officer and see if you couldn't get lost. The new roads and trails will require many new signs, and I'm sure there are still many odd places at which a stranger will wish you had placed a sign."

--Santa Fe News.

The Deer Creek Livestock Association held their annual meeting at White River on the Sequoia November 6. They were full of pep from start to finish--adopted a special bull rule and a blackleg vaccination rule, and passed a resolution to pay the same bounty for all lions killed in the territory covered by the association as that paid by the state. Verne Tyler--grazing permittee--about a week after the above resolution was passed killed four grown lions on his range--3 females and one male. The association has $110.00 to stack up to. A few more killings like this and they will go through insolvency. Hard luck for State Lion Hunter Bruce, who was just across the hill and out of the association territory, hunting in the Camp Nelson country.

Supervisor Wulff says "the idea of noting the boundary on these gibbet signs is good. In 1919, we placed on all our gibbet signs the California State Automobile Association metal enamel 'Help Prevent Fire' sign. I prefer these to the painted sign used on the Klamath not only on account of its durability but its attractiveness and visibility. The automobile signs are known the State over and when a tourist sees one he sits up and takes notice and does not pass it by as he would a merely painted one."

An interesting experiment which seems to have worked out successfully this year on the Trinity Forest was the grazing of 1000 goats on range which had already been grazed by 1600 sheep.

Ex-Forest Ranger Robinson was recently quoted in one of the San Francisco papers as follows:

"Fellow named Robinson, who is in the Forest Service up Sonora way, postcards down that the only difference between the modern ranger and the pioneers is that while the latter blazed the trails, the former trails the blazes."

Within the past year this District has purchased 1982 metal enamel signs for field use, and bids have just been called for on 1393 more signs; a total of 3375 altogether. Four hundred and seventy of these signs were for public camp grounds, ranger stations, etc., and the remaining 2905 are road and trail signs. Other districts are still going ahead with the manufacture of painted wooden signs, but our experience with painted signs has been so unsatisfactory and the metal signs are so superior in quality and appearance that we hope it may not be necessary to revert to the use of wood for primary sign purposes.

District 6 - North Pacific District

Cooperative Fire Protection and Range Riding

The Supervisor of the Ochoco Forest recently gave some rather interesting information in regard to fire protection cooperative efforts put forth by the various livestock associations on the Ochoco Forest during the past summer. Three of the livestock associations paid half of the expenses of a cooperative fireman and range rider or salter, the Forest Service paying the other half of the expenses during the summer period of from three to four months. Two other associations paid the entire expenses of their range riders and also had them cooperate in the fire protection work on the Forest. In all there were five men employed by the stockmen and the Service who were available for actual fire fighting and also used as a means of detecting forest fires. According to Supervisor Harpham the cooperation was very satisfactory, the only objection being that there was some difficulty in keeping in daily touch with the range riders. From the grazing viewpoint the cooperative employment of range riders has resulted in better management of the stock on the range units affected, and, incidentally, saved the associations paying half of the salary of the riders.

Ochoco Opinions

Ranger E. W. (Sigh) Donnelly, in charge of Snow Mt. District, demonstrated his usefulness and originality just after a severe electrical storm in August. This storm set eleven fires which started almost simultaneously and which were scattered over the entire district of 400,000 acres. Incidentally, a bolt of lightning struck the Forest Service telephone line only a short distance from the Snow Mountain Lookout Cabin and was warm enough to burn a section out of the wire. It also burned out some of the essential parts of the telephone at the Lookout Station which left Ranger Donnelly in a rather embarrassing position with only one man in sight as a helper to extinguish the eleven fires smoking up before him. Unable to call the Supervisor's office, he proceeded to handle the fires by himself with what assistance he could secure from grazing permittees. In this undertaking he succeeded admirably and within three or four days time the entire number of fires were under control and had cost less than $50.00 to extinguish. This is not all--Donnelly remembered that some years ago he operated more or less successfully one Henry Ford car and that when he sold or gave it away that he reserved for possible future emergencies one of the ignition coils. He found the old coil and took it to Snow Mountain lookout, installed it and soon had the instrument working about 150 per cent efficient.

Mr. Herbert Evison, Secretary of the Natural Parks Association, and Supervisor Weigle, with Jack Frost of the Wallace Falls Lumber Company, on October 26 made an examination of the timber along the Scenic Highway near Index, Wash., having in view the recommendation of certain areas to be reserved for their scenic value.

District 6 - North Pacific District (Continued)

The Cordova Mill & Lumber Company has been experimenting with the manufacture of flooring from native hemlock. Up to the present time not much success has been attained because of difficulties in drying. The last lot came from the kiln in a very brittle condition, as a result, the company believes, of too high temperatures in the kiln. The company has been furnished with a couple of Forest Service bulletins on kiln drying methods from the local office, and the manager states that the experiments will be continued. If the venture is successful it will mean a big saving to local builders, as fir flooring from the Puget Sound mills is selling in Cordova at $30 to $40 higher than the price to be set on the hemlock product. Incidentally, it will mean some increase in stumpage sales on the Chugach.

The following quotation from a letter from a pulp man is refreshing.

"Quite some time ago I returned from my Alaska investigation, and was very much impressed with everything I found up there, and before going on to the main idea of this letter I wish to state a few words in regard to the kindness shown me by the Foresters and Forest Engineers up there. I have never had the pleasure of doing business with a nicer bunch of men, men who are friendly and efficient in their work. It is a credit to the United States Government to have men like these in Alaska."

During the month this district has received 16 rafts that are running 300 M per raft and by the end of the month I will have them all scaled, making a total of 4,800 M ft. of sawlogs besides 17,000 linear feet of piling; had one raft of very fair logs and scaled 428 M in 7 hours. Have just returned from an 80-mile trip where I scaled 500 M ft. Balsam Fir and it is the first time that any of this timber has been used here. It is too brittle for structural work but will make good boards and boxes.

--Ranger W. J. Jones.

An ingenious method of taking up telephone wire was employed on the Fort Rock section of the Deschutes recently.

It was found necessary to change the location of about 17 miles of old telephone line and members of the crew were commenting upon the tedious method of operating the old hand power reel when some one suggested hitching "the thing" to the rear wheel of the International truck.

Acting upon this suggestion Ranger J. R. Mitchell evolved a wooden drum, properly beveled and covered with sheet iron which could be attached to a car wheel. As the road was rough and soft in places the truck idea had to be abandoned but Mr. Mitchell attached the drum to the rear wheel of his Ford car and immediately bales of No. 9 wire began to be turned out in record time, $\frac{1}{2}$ mile to the bale. Of course "Old Henry" had to be securely anchored and this was accomplished by tying the rear axle to nearby trees or stumps with No. 9 wire.

It's terrible when you have to fight fires in the summer and then fight the same ones again on paper in the fall!

A request has just been received from a party in Spokane for information regarding the establishment of a large pulp and paper industry at Aberdeen or Hoquiam. He states that the parties interested have a capital of $60,000,000 and that they expect to build the largest concern of its kind in the United States. They also request information as to Hydro-Electric power, stating that the first unit of a 200 ton plant per day will require 20,000 H.P. and that 60,000 H. P. will be required to manufacture 600 tons of pulp per day.

District 7 - Eastern District

Examiner of Surveys, Mr. A. R. Kinney, on the Natural Bridge, has completed the field work in connection with the survey of lands to be acquired under the Weeks Law. During the 1920 field season, twenty-five tracts varying in size from three to eight thousand acres, located in Amherst, Rockbridge, Augusta, Bedford, and Botetcurt counties, Virginia, were surveyed. The total area surveyed is approximately twelve thousand acres. He is now engaged on his office computations and expects to complete this work by the Christmas holidays.

Speaking of Government "inefficiency" on which so many of our good citizens love to dwell, the following case is to the point:

A man sold the Government a boundary supposed to contain some 1,800 acres. However, the Government survey and computation showed the tract to contain 1579.12 acres. This large discrepancy caused the man to become dissatisfied and with our permission he took our traverse sheets to a local engineer to be checked. This engineer found the Government computations to be absolutely correct and promptly charged his client $60 for a piece of work which the Government accomplished for $15.

This, of course, is a single and isolated case. However, here in western North Carolina, where there is a great deal of surveying and engineering work being done, it has been our observation that none of the individuals or corporations, including the large power companies, accomplish the same class of work for the money that the Government does.

Another interesting case in point is that of one of the largest timber holding companies in the South. Having purchased most of their holdings on the recommendation of so-called "timber estimators," it has become necessary for them to secure from the Forest Service (by offer of higher salary), a real scientifically trained timber estimator in order to determine just what they had. In a recent conversation with one of the high officials of this company, he was frank to tell me that this former Forest Service Forest Examiner had brought "order out of chaos."

--JAMES DENMAN.

Notes from the Arkansas

Intensive Forest Management field work was resumed on the Arkansas National Forest by Forest Assistant A. C. Shaw and party October 28. The field work on the Hot Springs Working Circle has been practically completed and work will start at once on the Womble Working Circle.

The Forest has been divided into ten working circles with an average National Forest acreage of approximately 64,000. Work was completed on two of the circles during the past year and it is expected that at least five of the remaining ones will be completed by June 30.

Forest Assistant A. C. Shaw, in charge of the Management work, did his initial work in the Forest Service on the Arkansas National Forest last year and his assignment to the Forest again this year was very gratifying.

The marked depression of the lumber market for the past few months has, in the absence of a proportionate wage reduction, resulted in the slowing down of timber sale operations very materially on the Arkansas, and there is very little demand for stumpage at this time at prevailing minimum prices.

Many of the mills in and adjacent to the Forest have closed down and others are running either on "short time," or with reduced crews. This is generally accepted as the plan to bring about a readjustment of wages and it is believed that the mills will soon resume operations under wage conditions more in keeping with the lumber prices.

Not a single fire has yet been reported on the Arkansas during the present fall fire season. The weather man has evidently had his eye on the Arkansas. Anyway the "Lord takes care of His own."

The Buck Knob-Oden Road on the Arkansas is nearing completion. This road is being constructed by the B.P.R. and is ten miles in length, forming a link in the Albert Pike Highway from Hot Springs, Arkansas, to Pikes Peak, Colorado.

By Presidential Proclamation, dated October 19, 487 acres of land were added to the Arkansas National Forest. This land forms a part of the watershed from which the city of Mena gets its water supply. The remainder of the watershed was already within the boundary of the Forest.

Notes from the Florida National Forest

Colonel Greeley, Assistant Forester Carter, and Assistant District Forester Eldredge have just completed a two days' trip over the Western Division of the Florida National Forest. This was the Forester's first visit to the Florida, and thus his first opportunity to pass in person on the Forest's many claims to uniqueness, as set out in the Bulletin some months ago.

Colonel Greeley expressed a doubt as to the soil being the most sterile and suggested that there should be substituted therefor the very much more worth while claim that Camp Pinchot, on Garniers Bayou, is the most beautifully located Ranger Station. This, he said, together with the fact that on the Florida Forest a definite management plan has been followed continuously for ten years, were distinctions to be truly proud of.

In accordance with plans made a year and a half ago, the officers of the Florida have collected more than one hundred pounds of longleaf pine seed. This seed has cost an average of not more than 75¢ per pound. It is quoted in the market at $2.00. Most of the seed was obtained by buying the cones at from 40¢ to 50¢ per bushel. The cheapest seed were some picked up by boys under

District 7 - Eastern District (Continued)

the tops of trees that were cut by lumbermen just before the cones opened. The present longleaf pine seed crop is the first since 1913.

The past season has been a very unsatisfactory one as regards the production of naval stores. Turpentine operators give as one cause of the small 1920 yield the fact that the production of a large seed crop by longleaf pine always reduces the flow of gum.

District Forest Inspector L. L. Bishop of the Florida spent the week of November 1st to 6th with Acting Supervisor B. M. Lufburrow on the Alabama. The work on the Alabama is increasing steadily and at this time nearly all of the usual Forest Service activities are represented.

The plans and specifications have just been completed by the District Engineer, Office of Public Roads, Montgomery, Ala., for the 1,000 foot bridge which is to be built across the head of Rocky Bayou, on the Florida National Forest. The bridge is being undertaken by the Forest Service in cooperation with the county, each paying one-half of the total cost of $11,500.00. Approximately 75 M. board feet of longleaf pine heart lumber will be required. A large body of National Forest stumpage will become much more easily accessible with the completion of the bridge.

Ranger E. R. McKee of the Florida has just been asked to proceed to Key West, Florida, for the purpose of formally accepting on behalf of the Forest Service, two motor yachts which are to be transferred from the Navy Department. Mr. McKee, while there, is to pass on the serviceability of the engines in the boats, the seaworthiness of the hulls, and their general condition. Also to suggest the best way to go about delivering the boats to their new home ports in Alaska. It behooves a Forest Ranger to be versatile. Ranger McKee's boat experience will enable him to see the job through.

From the Sherandoah

The Shenandoah Stockmens Association, a majority association formed by the range users on the Shenandoah Forest, held its semi-annual meeting on November 15, in the Forest Service offices in Harrisonburg, Va.

Two years ago this association went on record as being in favor of better stock and authorized the purchase of some pure bred bulls to be placed upon the various ranges within the jurisdiction of the association. It was the intention of the association to place one animal on each range division.

The association also offered to pay the owner of any registered and approved sire $15.00 for his use on the range during the grazing season. At this time there was not much pure bred stock in this section, and advantage was not taken of the $15.00 offer. The association then "raised the ante," and offered $25.00. This caused a number of stockmen to sit up and take notice and the indications that sufficient sires can be secured on this basis to stock the range now appear to be so favorable that the association believes it safe to sell out the animals which it has purchased and rely entirely on those privately owned to stock the range. The executive committee has, therefore, been authorized to dispose of all the sires owned by the association and to apportion the proceeds among those who were assessed for their purchase.

It appears that little or no difficulty will be experienced in disposing of the animals at the purchase prices as most of them were spoken for immediately after the adjournment of the meeting by association members. The secretary of the association has expressed the belief that the money expended for their purchase will be returned to the association dollar for dollar.

It is the purpose of the association to continue the yearly assessment of twenty-five cents per head to raise the funds necessary for the payment of the $25.00 bonus to the owners of sires.

Many complaints were registered with the Forest Supervisor concerning the heavy losses inflicted during the past season by bears. According to the records of losses kept by the Forest Service about 1 per cent of the total loss of 2.02 per cent was due to the depredation of these animals.

Several hunting clubs have been organized and a number of bear dogs purchased, so that it appears that Bruin is doomed to be more or less interrupted in the future in the pursuance of his favorite outdoor sport.

Four or five bears have been taken this fall, among them one old fellow which is known to be a cow killer, since he carried in his carcass several buck shot emptied into it last summer when he was caught red-handed by one of the herders. It is entirely possible, and very probable, that two or three bears are responsible for most of the damage which has been done.

Di[illegible] - Eastern District (Continued)

A very amusing incident occurred on the North River Ranger District a few days ago, when a party started out from Sangerville before daylight on a bear hunt. Men, dogs, and guns were loaded into a car and started for the forest and they had no sooner entered it when much to their surprise as they rounded a bend in the road, Mr. Bear stood blinking in the glare of their headlights waiting to receive them.

In the mad scramble of men and dogs that followed, two loads of buck shot were discharged through the top of the car without the least injury to the bear who had decided by that time that that was no place for him. By daylight, however, the dogs had treed the bear and shortly afterwards a 30-30 barked and he tumbled to the ground.

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

December 13, 192[illegible].

"Lay on Macduff!"

If you like the Washington Bulletin tell your fellow officers; if you don't like it - write me. Tell me how YOU would run a paper to please several thousand men and women. Pats on the back or knocks are not wanted, but real constructive criticism will be appreciated at any time. Don't suggest printing this publication; putting on a fancy cover; double spacing, or a score of other things that just can't be done. What I want to know is how to make the Bulletin more interesting to each and every officer of the Forest Service. New ideas, briefly stated and to the point are what are desired. Here is your chance - fly to it fellows!

--The New Editor--

British Foresters Study American Methods

Seventeen British forest engineers are spending fifteen months in the United States and Canada preparatory to taking up duties in India and Burma.

In the training of these men it was recognized by the British Government that it would be helpful and instructive to assign them to various lumber and logging operations in the United States and Canada, in order to make them conversant with modern methods adaptable to the various needs of the country in which they may be located.

The forest engineers will study pine and cyprus logging in the South and lumbering methods in Montana, Idaho, Oregon, California and British Columbia, so that by the time they are ready to journey to the Far East they will have become familiar with practically every modern logging system.

This sending of forest engineers to America to complete their training is an innovation in keeping with the plan which has been successfully pursued in every other industry, but which is relatively new in the lumber industry.

"Are We Downhearted?"

The following extracts from a letter received by Col. Greeley from Mr. Axel E. Schard of the Royal Swedish Forest Service, who recently toured the National Forests of this country, should be an inspiration to every Forest officer:

"I want to thank you ever so much for all that you and the U. S. Forest Service has done for me during this year. Everywhere I have been received with open arms, I have got all the information I could possibly want, all the Forest officers have tried to make my journey through the States as pleasant as possible.

"The Forest Service seems to have a very hard battle to fight in every country against private interests, and I believe that the U. S. Forest Service is more up against it than our Swedish Service. However, it has been a pleasure to see the great interest all the American foresters are taking in their hard work, and I admire the fighting spirit of each and all.

"I am very shortly going to give some lectures, telling different forestry associations about American Forestry and logging. Believe me, the U. S. Forest Service's reputation will not be suffering from my tales."

Rare Honey-Sugar from Eastern Pines

"The American Food Journal" is authority for a new source of sugar supply, melezitose, or melitose, which is an extract of honey. This new sugar is, however, not yet a competitor of the sweetening of our morning coffee or afternoon tea, being chiefly valuable at present to chemists and bacteriologists, for use in certain tests, particularly for distinguishing between closely related species of bacteria. According to the Journal, melezitose has been a very rare sugar until recently, when the U. S. Department of Agriculture learned of its existence in considerable quantities through a strange coincidence.

In certain sections of Pennsylvania the bees were dying because the honey stored by them had crystallized. On examination this crystallized substance in the honey was found to be "melitose" which, the Journal tells us, "derives its name from melez, the French name for the larch tree, on which it was originally discovered in the form of honeydew. It also occurs in a sugary incrustation, or manna, on a leguminous tree in Persia and adjoining countries. Recently it has been found by the Bureau of Chemistry in a similar product on the Douglas fir in British Columbia; and now it has turned up in Pennsylvania, stored away in the honeycomb, in numerous hives."

The origin of this new sugar is of interest to foresters and brings a relatively unimportant species into the limelight. The story, as told by the Journal, is as follows:

"The scrub pine, and rarely other species of pine, are subject to attack by a plant louse and by a scale insect. In the course of their life activities these insects produce a honeydew which is rich in melezitose. In dry summers, after the white clover flowers have ceased to yield honey, the bees turn to this honeydew and collect it, but it crystallizes as fast as they store it away. This occurred in 1917 and 1918, and considerable losses were suffered by beekeepers. In 1919 the weather was so moist during July that no melezitose was gathered by the bees at all. But it probably will be collected in future whenever the summer is dry; and the honey of central Pennsylvania may afford a permanent source of sugar previously so rare as to be only imperfectly known. The Bureau of Chemistry extracted considerable quantities from the honey of 1917 and 1918, and is making extensive experiments with it."

The Whole Forest Was There

Norfolk, Va.; Miss Ada Oakes, daughter of Mr. and Mrs. J. C. Oakes of Washington, N. C., became the bride of Walter Pine of Salisbury, N. C. The best man was Robert L. Birch; the bridesmaid, Anna Lee Laurel, and the preacher, the Rev. Oscar T. Wood. The couple went to Hickory, N. C., to spend the honeymoon with the bridegroom's aunt, Mrs. E. W. Shingle. --Chicago Tribune.

Plant Trees Near the Mills!

"Lumbermen will soon be planting trees in the vicinity of their mills," is the novel prophesy made by Ellwood Wilson, Forester for the Laurentide Paper Company, Quebec, at a meeting of the Paper and Pulp Association in Chicago. "I admit that this is a very broad statement," said Mr. Wilson, "but perhaps not so much of a dream as one would imagine. In fact my own company has already started to build up a forest in this manner in the immediate vicinity of their mills.

"Take for example the large areas of timberland such as we have in Canada, from which are obtained from five to fifteen cords of pulpwood per acre. You have got to take your men, equipment and provisions into the woods even to market this small amount, and after you have finished cutting, wait for fifty to sixty years for another crop, which, in all probabilities will be much smaller than you first cut. Would it not then be sound business to have your future timberlands located as near your mills as possible? This can be accomplished by planting lands adjacent to the mills with the best possible stock, and then when your logging proposition comes along, look how the whole thing is going to be simplified. Instead of driving or hauling or railroading your wood all the way from 50 to 200 miles, you are going to be able to go out within ten or twenty miles of your mill, put in your portable electric railway, utilize machinery which will cut your trees down just the way you cut your corn crop to-day and you are going to get instead of five, ten or fifteen cords per acre, forty and fifty cords. You will reduce your logging costs and simplify all of your operations. Instead of huge wood piles which we see in some of our northern countries to carry us through the winter with insurance and money tied up in them, we are going to take the wood right straight from the stump to the mill. We are going to utilize a tree the same day it was cut, perhaps, or the day after."******

Ever Heard of the Crescograph?

It has been invented by a Hindu, Sir J. C. Bose, director of the Bose Institute of Calcutta and is a device so powerful and yet so delicate that it magnifies motion by about ten million. On this basis, a snail travels faster than man can visualize. A point on the equator whirls around at a rate of 1,037 miles per hour, but the crescographic snail can laugh at such motion for while the earth rotated once, the snail would have gone around some forty times. A seedling growing a foot a year would make around a fifty-thousandth of an inch a minute which is invisible to the eye, which when magnified by the crescograph amounts to 200 feet a minute, which a blind man could feel, if he could not see. The instrument was devised to study plant growth and behavior, especially responses to temperature and to gasses.--D-5 Bulletin.

Investment Opportunities

Secretary of the Treasury Houston has just announced that there will be issued in 1921, a $1 Treasury Saving Stamp and a $25 Treasury Saving Certificate, the former being a non-interest-bearing security. There will also be available to investors a $5 Saving Stamp, in a 1921 series, and a 25 cent Thrift Stamp. As the security market becomes more settled, Treasury Saving Certificates, bearing interest at 4 per cent compounded quarterly, exempt from State and local taxes and from the normal Federal income tax, should prove increasingly attractive to small investors.

The Elk and Its Teeth

Recently the District Foresters in the Northwest have called the Forester's attention to a series of advertisements inserted in local papers and to letters addressed to many of our Supervisors in which was expressed the desire to secure any number of elk teeth. The advertisements stated that full market prices would be paid for good specimens.

For many years the killing of elk merely for the purpose of securing the two large tusks, to be mounted and worn either as emblems or for personal adornment, caused the destruction of a large number of these animals. We have a record of over 500 head being killed in one winter for this purpose alone.

In an effort to stop this slaughter and to do their share in preserving the elk, the Grand Lodge of the Benevolent and Protective Order of Elks as far back as 1908 took the position that the tusk of the American elk "is not and never has been the emblem of the Order, official or otherwise." The Grand Lodge in its statements says that the impression that it is an emblem of the Elk Order is general among outsiders, because so many of the members of the fraternity have taken a fancy to wearing them, the idea being also prevalent among members of the Order. The Grand Lodge emphatically states that this is not the case, and urges members of the fraternity to do everything possible to discourage the securing and wearing of these teeth for such purposes.

In spite of this fact the demand for tusks still continues, and, judging from the efforts made by the manufacturing jewelers to secure good specimens, there must be a ready market at good prices or there would not be such extensive advertising for them.

The matter of taking some steps to prevent advertising of this kind was thoroughly discussed with the Biological Survey, but so far as can be determined, there is no legal way in which the matter can be controlled. The best we can do to put a stop to the traffic is to give wide publicity to the fact that the tusks are not and never have been an emblem of the Order of Elks. (Later): The Forester's efforts to put a stop to the commercialization of elk teeth seems to be bearing some fruit.

The Elk and Its Teeth (Cont.)

Mr. E. W. Nelson, Chief of the Biological Survey, took the question up with his field men, hoping to get some publicity on the matter. The following extract from a letter from Mr. Nelson shows the quick results of his work:

"The Rhode Island game warden of the Biological Survey visited the Bassett Jewelry Company of Providence in regard to their advertisement, and upon learning of local restrictions on the use of elk teeth the manager of the company informed him that he had recalled his advertisement and that he would make every effort hereafter in purchasing any of these teeth to see that they were legally obtained. Furthermore, he furnished our game warden with information which may enable us to head off some of the traffic which is now going on, and possibly to locate some of the poachers and illegal dealers in Montana. We shall follow up the matter as rapidly and as thoroughly as we can to try and limit this traffic as far as possible."--W. C. Barnes.

There's nothing like keeping everlastingly after a thing if you believe you are right.

New Legislation in Congress

Representative Timberlake of Colorado introduced a bill on the second day of the Session asking for a thirty thousand dollar appropriation for the maintenance of the Fremont Experiment Station in Colorado - the funds to be expended in experiments to determine the most satisfactory method of managing forests and forest lands.

Washington Notes

F. S. Meeting: The second "family meeting" of Forest Service employees in Washington was held on December 7.

Col. Greeley gave a brief account of his recent trip through the South, during which he visited the citrus belt of Florida in company with officials of the Consolidated Naval Stores Company, the largest lumber owners of the State, and the Florida Citrus Exchange. The big problem confronting these organizations is the shortage of lumber for shipping containers for fruit. Over 12 million boxes are now required yearly for the marketing of grapefruit and oranges alone, and an additional 13 million boxes by farmers for garden truck. Each box contains 5½ board feet of lumber, or a total yearly consumption of 137½ million board feet to supply present demand. Also, it is expected that within 10 years the demand for boxes will increase to at least 40 million yearly. The lumber companies and citrus growers have appealed to the Forest Service for suggestions as to how to meet this situation successfully.

The Forester also visited the holdings of Henry E. Hardtner, Urania, La., a lumberman-owner of 70,000 acres of forest land who has for years been interested in and practiced forestry. Over 45,000 acres of cut-over land have been replanted, and excellent results in natural reforestation secured through the fencing of 3,500 acres against hogs. Experimental burning of cut-over lands has also been done, and results show that the longleaf pine, although not entirely killed out by repeated burnings, is very seriously retarded in growth.

Timberlands of the Great Southern Lumber Company, which owns 400,000 acres in Louisiana and Alabama were inspected, and the excellent results of forestry practice in the selection of groups of seed trees on logged-over areas seen. This company operates a sawmill with a capacity of one million board feet a day, and cuts over approximately 10,000 acres of forest per year. The sawmill waste is utilized in a large capacity paper mill. Under forest management the company expects to have available a second crop of pulpwood timber in 25 years. "I never expected," said Col. Greeley, "to live to see the President of a great corporation on his hands and knees in the forest, searching for little pine seedlings, but this actually did happen, and illustrates the interest that officials of the company are taking in this great problem of a future timber supply."

Col. Greeley also reported as having found in Alabama a Forest Service working plan made by (now) District Forester F. W. Reed, that has actually worked. This plan was prepared for the Kaul Lumber Company for timberlands logged during the period 1900-1910, and provided for the retention of all trees under 15 inches in diameter. As a result of this forest management the company now has an excellent second growth of small timber ready for cutting.

Assistant Forester Will C. Barnes also gave a short talk on "A Senator's View on Government Clerks." The meeting closed with motion pictures of "Lumbering on the Coconino National Forest, Arizona."

Red Cross: In the annual enrollment campaign recently conducted by the American Red Cross, the members of the Washington Office subscribed $85.00.

New City Forester: The War Department announces the appointment of Mr. Smith Riley as Forester for Washington, D. C. Mr. Riley expects to concentrate the greater part of his efforts on improvement of the Rock Creek Park, the scenic and recreational values of which have never been fully developed or appreciated by the citizens of the District. This announcement will be received with extreme gratification by Mr. Riley's many friends and former associates in the Forest Service.

Forest Products Laboratory Notes

In Ye Good Old Days: To-day, when prices are top notch, we sigh for the good old days when a market basket could be filled for a dollar - but forget we weren't getting as much salary or wages in those days as we are now.

Here is an illustration from a book called "The Thirteenth - the Greatest of all Centuries," and is quotation of the prices fixed at that time by royal decree in England:

Pair of shoes - $0.08
Broadcloth, per yard - $0.27
An ox - $6.00
A fat unshorn sheep - $0.41
A fat two-year-old hog - $0.83
A fat goose - $0.05
Ale, per gallon - $0.02
Wheat, per quarter - $0.83

This schedule of wages in the same century was also established by royal decree:

A woman, hay-making or seeding corn, per day - $0.02.
A reaper - $0.08
Mowing an acre of grass - $0.08
Threshing a quarter of wheat - $0.08

A thumb-nail analysis of the cost of living in the 13th century in England shows that things weren't so very different from conditions of the 20th.

The Elephant Awaits: In India, forest officers are each assigned three elephants for use in their official work. They are required to practically domesticate and train their own elephants. Imagine Sweet and Teesdale each realizing the dream of his boyhood - owning an elephant!

Snookums: Some very interesting tests have been made this week at the Box Laboratory. The West Coast Pine Manufacturers Association sent fifty boxes (knocked down boxes) and 18 boxes of Jonathan apples from the state of Washington. The boxes were nailed and filled with apples and tested to determine the relative merits of sides 3/8 and 5/16 inches thick; of one and two piece sides; of one and two piece ends; and nailing with 4, 5, and 6 penny weight nails.

Seven bushels of crushed apples have just been sent over to the University Hogs.

District 2 - Rocky Mountain District

Carp and Red Clover: The Supervisor of the Nebraska Forest, in connection with his annual game report, outlines a very interesting situation. A few years ago, the construction of ditches and reservoirs established a good many ponds which now contain a great many carp. They have become so numerous in the lakes of the sandhills in the water where formerly rushes and grasses grew several feet tall that such vegetation is being grazed down by the carp and hiding places for hunters are less plentiful, thus giving the ducks more protection than they formerly had. This is like the story of "The More Old Maids, The More Red Clover," which goes as follows:

"The more old maids there are, the more cats; the more cats, the fewer mice; the fewer mice, the more bees; the more bees, the more red clover."

Aviator Visits Medicine Bow Forest: James Murray, aerial mail pilot, from Cheyenne, Wyoming, to Salt Lake, Utah, paid a recent unexpected visit to the Medicine Bow National Forest, due to a snowstorm, low-hanging clouds, and engine trouble. Flying low, to keep his bearings, over the Snowy Range, Murray was forced to land in a bunch of timber, colliding head on with an 18" spruce, completely smashing his engine and breaking one of the wings of the plane. Luckily he was not badly injured. Striking out through the timber northward toward the railroad, he walked in 18" snow until darkness and exhaustion overtook him, then camped beside a fire under a tree for the night. Next morning he discovered he was only 25 yards from a number of cabins at Sand Lake, where a Forest Service sign pointed the way to Arlington, 4 miles distant, which he reached at 4 P. M. and reported by telephone to headquarters at Cheyenne. The mail was rescued by pack outfit by Ranger Frank Henry and sent to Laramie for forwarding to destination by rail.

A New Idea In Exhibits: The Pagosa Lumber Company is extending its operations on the Montezuma National Forest by selling bonds, which the Bankers' Trust Company is marketing. To assist in marketing these bonds, the Trust Company is putting in a window display and this office is cooperating with them in showing a timber scene on the Montezuma National Forest. The window space will be 3 feet by 6 feet.

"Mike" Sweeney Leaves Service: Forest Examiner Sweeney of the Colorado Forest, who has been in the Service since 1912, is resigning to take a position as Logging Superintendent for one of the tie operators on the Medicine Bow Forest in Wyoming. Since Sweeney has spent the greater part of his time, while in the Service, working in the Lodgepole pine regions, he is particularly well fitted for work of this character and we have every reason to believe that some of the difficulties encountered in the past with operators in this region will be smoothed out with Sweeney's cooperation.

Psalm XXIII, 1: Comes now the "Shepherd" of the Department of Agriculture,--presumably to stand guard over the newly made "Forest Aids"--an examination for such a position having just been announced by the Civil Service Commission.

"Out where the west begins" we call them "Sheepherders," which epithet, although not so euphonious as that used by our Eastern friends, is nevertheless considered sufficiently odoriferous and obnoxious to get a "rise" out of most any "Old timer."

"Twelve hundred dollars a year with house and garden" is offered; but how about a collie dog and teepee tent, to say nothing of "grub" and "chewin" and "snoos" to help while away the long summer days. Eighth grade school education too is called for. That would let out a lot of our Mex. "amigos," who though short on "book learnin'" probably know more about handling "woolies" than was ever printed.

No, Clarence! We don't believe there will be many "rough" westerners applying for the "Shepherd" job.

Spotting Poachers with a Transit: Rangers R. C. McConnell and William Fay, surveying on the Colorado National Forest, discovered men carrying rifles and leading horses at a distance of about half a mile from them. Turning the telescope of the transit on them, they could see that one of the horses was carrying a buck deer, apparently recently killed. They attempted to intercept these men in their route of travel, but were unsuccessful. The rangers tracked the game violators until dark and then resumed the search on the next day, backtracking them to where the deer had been killed and dressed and continuing the tracking to an old house used as a temporary stopping place for a stockman. Through an appeal to the Supervisor's office and the Sheriff's office, a search warrant was secured and a saddle, saddle blanket, and rope with deer hair and blood on them were found in the cabin, and automobile tracks were dicovered leading away from the cabin. On Sunday morning another search warrant was secured and the residence of the stockman, about 2 miles from the cabin, was searhed for evidence of deer, but without avail. However, the stockman finally admitted having a part in the killing and agreed to come in and plead guilty. The District Attorney and Justice were secured at 2 P. M. on Sunday and the stockman, Charles Thomas, pleaded guilty and was fined $100 and costs, a total of $120. Thomas claimed he did not do the killing, but would not give any information leading to the arrest of the other parties.

District 3 - Southwestern District

Ancient History: "In about September, 1689, Domingo Jironaz Petros de Cruzate, Governor and Captain General of the King of Spain, granted to the Isleta Indians a strip of land extending from the Rio Grande del Norte to the 'espinoas del Sierra Sandia'--that is, to the 'backbone' of the Sandia Mountains. One hundred and seventy years later an American Surveyor, being apparently loath to drag a chain through rough timbered mountains, meandered along the foothills on an offset; but miscalculated the offset by several miles. Fifty years later still, the Isleta Indians woke up to the fact that the Manzano National Forest was claiming this strip between the old meander line and the backbone of the mountains.

"The Indians appealed to the Government and the Secretary of the Interior decided that the disputed area belonged to the Indians as they were not bound by an erroneous survey. A re-survey was ordered which has now been made but not yet approved. Until the survey is approved the Forest Service will continue administering the area.

"Unquestionably the Isletas have the oldest 'squatters' claim' in the Manzano Forest, for the grant by Captain General Jironza was merely a recognition of a claim established ages before. According to Isleta tradition, their forefathers had used this land so long ago that 'twenty-three generations had already passed when news was brought to the Pueblo that some strange people, white as snow, with houses built on boats and the boats with wings, had come to our country'.

"On February 4, 1750, the Isleta tribe purchased the Lo de Padilla Grant to the south of the Isleta Grant, and have owned it ever since.

"We defy any National Forest to come forward with a land claim that originated twenty-three generations before Columbus discovered America or about the year 700 A.D. Let us thank a kindly Providence, however, that the correspondence doesn't go back that far."--Manzano Ranger.

Cut Witness Tree: "Warrants were recently served by the U. S. Marshal on two of the Saginaw sawyers at the lumber camp for cutting a witness tree. It is understood that they intend to plead guilty when brought to trial. The evidence shows that the saw cut was started between the B and the T of the witness marks."--Tusayan.

Wireless vs. Wire: Some recent figures on the probable comparative cost per year of telephone line vs. wireless telephones, in connection with a sample case on the Crook, might be of general interest. The two points to be brought into communication are 40 miles apart. We figure that a pole line would cost about $8000 to construct and $100 per year to maintain. Wireless would probably cost $2000 to install and $100 per year to maintain. This gives the wireless a clear lead, on paper. But there are many other points bearing on comparative usefulness, such as ease of extension, dependability, intermediate connections, signaling, etc.

Exhibit for School Teachers: The District exhibit has returned by express from Phoenix and two days after being packed at that place was being set up in the Armory in Albuquerque preparatory to the State Teachers' Convention being held here this week. The entire front balcony is occupied by the display forming a very attractive foreground for the convention, the other decorations of the auditorium being in keeping with the exhibit. The teachers are showing an intelligent interest and giving considerable study to the various ideas illustrated, before and after meetings. We expect to reach many thousands of school children through this method of "teaching their teachers." The value of one thousand school teachers viewing the exhibit at their leisure is unquestionably worth more in advancing the Forestry idea than having many times that number of State and County fair visitors see it.

National Forests as a Tonic: One Arizonan has found it out. We tried to tell the rest of 'em at the state fair with our exhibit. Here's what a visitor to the exhibit said: "Yep I've been here 30 years, and I haven't been to the coast yet. But I quit the valley every summer for a month or so and it's to the mountains for me. It's the combination of those hills with this desert that makes Arizona what it means to me. Why a couple of weeks fishing and camping with the car up in the big timber of the White Mountains and I come back a new person. I tell you I'm long for your forests."

Never Again: E. J. Smith and Roy Pace pleaded guilty in the Federal court at Prescott on November 12, of fire trespass on the Sitgreaves. They were each fined $50. While these men were engaged on road work they left a fire which was later found by Ranger Slosser. No attempt had been made to handle the fire which had been left when the men quit work at night.

Bronson Visits Arizona: Mr. D. D. Bronson, late of the Forester's office in the Branch of Operation, was a visitor in Phoenix during fair week. He and Mrs. Bronson are on their way east after a several months' automobile tour of Canada and the western part of this country. The Bronsons visited the Forest Service exhibit at the fair grounds several times during their stay in that vicinity.

Honor the Flag: "Mr. A. Helms, of the New South Wales Forest Service, recently on the Coconino, made the following very surprising remark: "This is the first Forest Service office I have visited in this country where the flag is raised in the morning and lowered in the evening." He had at the time of his visit here been on several Forests in California and the Northwest, also at District Offices, Experiment and Ranger Stations. Evidently some one has been careless, as a man from a foreign country would notice this omission of respect to the flag possibly more than any of us. I wonder how many Rangers observe this small but very important duty. Aside from respect, it lengthens the life of the flag."--Coconino News Bulletin.

Educating the Chiefs: The District Office will go to night school starting on the evening of December 9 and continue on Tuesday and Thursday evenings thereafter during the winter. The instructors will be the different members of the office themselves and the teacher's mantle will descend in turn on various individuals. Dendrology will be handled by Kircher and Leopold on the first night. On December 14 Krauch will lead the evening's consideration of Silvics. Dr. Long appears next with the subject for discussion being "Diseases of Trees." The central idea is to review the whole field of forestry for the men who go into the field who will in turn be better qualified to pass to the field men some of the fundamentals of technical forestry.

District 4 - Intermountain District

New Bridge on Snake River: At last we are to have a bridge across Snake River. After about five years of "digging" the Government and the State dug up $155,000 and in two days Jackson's Hole made up the remaining $15,000 to complete the project. The last contract has been signed up and work will begin within ten days and is to be completed by July 1 of next year. The project involves the construction of 650 feet of steel bridge, about one mile of graded and riprapped approach and extensive piling and jetty works for a considerable distance above the bridge to control the river.--Teton News Letter.

Simplified Spelling: First Ranger - "I have an invention that will mean a fortune."

Second Ranger - "What is it this time?"

First Ranger - "Why it is an extra key for my Oliver. When I don't know how to spell a word, I just hit that key and it makes a blur that might be an "e," an "a," or almost anything else."--Dixie Doings.

Things Might Be Worse: Rangers in District 4 might have something to worry about if the list of common names of plants which it is expected they should know contained the following which represent some of the more important sheep forage plants of the New Zealand forests. Each reader will be allowed his own pronunciation.

kanono - heketara - pohuehue - kawakawa - hupiro - kakaha - puta putawheta - porokaiwhiri.

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In writing for the press, use one side of the paper, and don't use that unless you are sure you have something worth while to say.

When you have done a kindness, and your neighbor is the better for it, why need you be so foolish as to look farther and gape for reputation and requital?--Marcus Aurelius.

District 5 - California District

Duties of a Forest Supervisor: This morning one of Supervisor Benedict's "parishioners" called up to say there was something the matter with her Dodge car--she didn't know what. Could he help her? "Sure. Bring it over; all down hill to the office." So the Dodge came, the trouble was located and the owner went away happy.

Soon after noon the backer for a small sawmill arrived at the Government office with half a dozen striking workmen, to have the Supervisor explain about the sale, the lumber bought and paid for, and the relations of the Forest to the mill. Patiently Mr. Benedict went over all details, though in the middle of his explanation came a telephone call from the nearby village: "Mr.______ has cut his hand dreadfully, and we don't know what to do. Will you come over?" "Bring the man over here," was the terse reply. Then with a call to the telephone operator to "get bandages and hot water and antiseptics ready" he went on talking to the lumber jacks.

It was a bad cut--rather more than first aid could manage, so a telephone call was put through to a Fresno doctor who, upon getting Mr. Benedict's report said: "Send him down to me; it's too serious for you to try to take care of."

Five minutes later, having finished his explanation to the waiting mill employees, Mr. Benedict was on his way in an auto taking the man toward Fresno.

Some Profiteering! When we suggest to the lumberyard man that $140.00 per M. is a trifle high he comes back with the reply that he would make more money under the old times of 1914 when the same material was sold at $35.00.

It may be true but it sounds fishy especially after having secured lumber at what we know is cost.

This year the Nevada-California Power Company installed a small mill on Leevining Creek; a long haul, big overhead, small seasonal cut, and after charging cost of mill and installing to price of lumber they found the sawed material "stood" them $30.00 per M. This also included stumpage.--Mono.

Times Do Change: The following extract from the Forest Reserve Manual of 1902 shows that conditions have improved somewhat for the field man just starting in.

"Class 3, Salary $60 per month. Rangers are required to keep one or two saddle horses to enable them to travel readily about the reserve. Rangers must also provide themselves with a pocket compass, a camp outfit, ax, shovel and pick or mattock."

Can't Smoke on this Job! Pennsylvania foresters and rangers must do without smoking on their trips through the woods during the fire season, according to the ruling by Chief Forester Gifford Pinchot this week. The state employees are expected to set a good example to campers, contractors and visitors to state forest lands.

Tree Growth: There are about 25.000 individual numbered trees in D-5 which are remeasured for growth data periodically--usually every 5 years. These trees are located on "Methods of Cutting," thinning, fire damage, turpentine plots, second growth yield plots, etc.

Preliminary summaries of remeasurements just completed for several Methods of Cutting plots indicate a marked decrease in annual growth per cent during the last 5 years as compared to the preceding 5 years. Under normal conditions it is believed the effect of cutting should have been greatest during this period.

The following annual percentage figures for the Sierra show the difference:

Diameter class - Inches	4-11	12-17	18-23	24-29	30-35	36-up
Period 1911-1916	6.38	4.37	3.20	1.63	1.58	1.25
Period 1916-1920	3.79	2.55	1.87	1.29	0.92	0.90

Forest Signs: To-day we let a contract for 1393 metal enamel road and trail signs at an average cost of $1.23 each. This is less than 50 per cent of the cost of the Klamath painted signs, while it cost us $3.00 each for signs painted in the District Office a few years ago. If any Forest can make and paint wooden signs for less than $1.25 each, please tell us how they do it.

District 5 - California District (Cont.)

Fire and Erosion: The erosion from the side hills as a result of last summer's big fires on the Angeles has completely obliterated the old channels of the streams and made a more or less continuous even wash from bank to bank. The water flows first on one side and then on the other, and is so building up the stream bed higher all the time, with no well defined stream channel. With heavy storms this winter this sand and debris will all be washed out into the Valley. A concrete ford across the wash of San Dimas Creek usually is covered with from 2 to 6 inches of gravel each winter which is cleaned off after the winter storms are over. This last year, following each and every storm, it has been necessary to clean off from 6 to 24 inches of mud from this roadway.

The Lumber Situation: During October the outstanding features of the lumber situation were the further reduction in volume of production, the resumption of the falling tendency of prices, the improvement in the transportation situation, and continued financial stress. Demand in all the consuming markets was stagnant.

Production in all regions was probably lower than at any time since the armistice. In southern pine, production was little if any better than 60% of pre-war normal. In Douglas fir it did not exceed 75%. Labor conditions were good with few controversies, and with an oversupply of labor beginning to show up. It is said that the efficiency of labor has shown a marked improvement. Some reductions in wages have already taken place.

In planting fish in a small stream not over 500 fingerlings or 2000 fry should be planted to the mile.

District 6 - North Pacific District

Travel in Alaska: As an illustration of the difficulties of transportation which Forest officers on the Alaskan Forests have to contend with:

Ranger Strand, who is stationed at Katalla, 65 miles down the coast from Cordova, and who is working under temporary appointment, was unable to get to Cordova on the date set for the ranger examination because the storm tied up boat service. Weather permitting, the small boat which makes the trip regularly would have landed him in Cordova in ample time. However, it is not uncommon during the winter months to be held over in Katalla anywhere from a week to 30 days waiting for a chance to beat it up the coast to Cordova between gales.

On one occasion, Chief of Field Division Parks of the Juneau Land Office was marooned in Katalla for 36 days waiting a chance to get to Cordova or some other port where regular steamer service is maintained.

The only way to leave Katalla is by water except during the winter months when the sloughs and streams are frozen over, when it is sometimes possible to make it cross-country by dog team or afoot to the Copper River & Northwestern Railway. However, this mode of travel is often impossible for greater or less periods because of blizzards.

And Katalla is some place to be marooned in. If you don't believe it, ask Supervisor Beach.--L. C. Pratt.

Lumber Study Reports: "Timber Ownership and Lumber Production in the Inland Empire" by David T. Mason, is out, published by the Western Pine Manufacturers Association of Portland, price 50 cents. This bulletin is Part V of a series of studies of the lumber industry made by the Forest Service. The possibility of the publication of Austin Cary's report "Timber Ownership and Lumber Production in the Douglas Fir Region" is now being considered by the West Coast Lumberman's Association of Seattle.

Alaska Publicity: According to present plans the National Forests in Alaska are due for considerable publicity, the coming winter Bulletins are to be prepared by Messrs. Sherman, Flory, Guthrie, Heintzleman, with special articles by Col. Greeley, Flory, Weigle, Guthrie, Hoffman, Zeller, Heintzleman, Pratt and Drake. Also possibly a tourist map of Alaska, with general Forest information printed on the back.

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Sorrows humanize our race. Tears are the showers that fertilize this world. And memory of things precious keepeth warm the heart that once did hold them.

District 6 - North Pacific District (Cont.)

Old Willamette Military Road: Surveyor T. P. Flynn with P. E. Kuenzel of Engineering completed the preliminary survey of a portion of the Old Willamette Military Road in October. The party consisted of six men and a cook, who is highly recommended, one H. Hebert by name. The portion relocated is from Rigdon Ranger Station on the Cascade to Summit Lake within the Deschutes. The new location crosses the summit at about 100 feet lower elevation than the old road. Ranger C. R. Jones of the Cascade has furnished some very interesting historical data regarding the Old Military Road which has been used with illustrations for stories by the Portland papers.

Recreation Booklet: Copies of the Washington Forest folder, "A Mountain Vacation Land," have just been received from the Government Printing Office. This is the best looking folder yet gotten out for this District, being printed on a high-grade paper which brings out the 24 photos to very fine advantage. The material, photos and general layout of the folder were all furnished by the Bellingham office. It is considered a very creditable piece of printing work. (Congratulations--your booklet doesn't even look like a Government publication. Ed.)

Crown Forest Fire Damage: Damage of a crown forest fire in yellow pine timber has been shown by Forest Examiner M. L. Merritt, who has completed a five-year investigation of the results of a fire that swept over 10,000 acres in Deschutes National Forest in 1915. Many of the trees were browned; others were less injured. The residents said the trees would survive. Mr. Merritt marked 100 of the brownest trees, 100 of the lesser burned and 100 more of those slightly touched by the fire. Each year a check was made to see how many had died. Upon the completion of the fifth year Mr. Merritt found that 94 per cent of the most browned trees had died, 9 per cent of the medium browned trees had died, and 8 per cent of the slightly burned trees died.

--Timberman.

District 7 - Eastern District

"Penny" Timber Sales: Recent cost reports from several of the Rangers on the Pisgah Forest show that the "penny sales" of acidwood are handled for 10¢ to 15¢ per cord. This includes all costs of administration except the time spent in going over the sale areas by an inspecting officer. The larger sales of sawtimber, where the bulk of the timber is designated for cutting; where snags and diseased trees are marked, and where scaling of logs is frequent, show a cost of 3½¢ per M to 14¢ per M, for operations extending over periods of 6 months to 2 years.

Industrial Depression: The wood-using industrial situation in the Appalachians is not without a considerable degree of interest of late. Many mills have shut down in various parts of the South Atlantic States, including such plants as the Roper Lumber Company, employing a thousand men. So far as the mills of western North Carolina are concerned, there has not been much cessation of cutting. A few have restricted their output but the majority still continue to saw wood and in the absence of an active market are piling up the increase in their yards waiting for a better day in prices. Some of the tannic acid plants have closed and most of them have reduced their normal output. The price for acidwood around Asheville is $8 per cord. The Champion Fiber Company at Canton, 20 miles from Asheville, which, it is understood, supplies the "Saturday Evening Post" with paper, is now on a 4-day operating basis, but is using its labor supply during the other days to assist in the construction of a new paper plant. The market for tannic acid is weak and this company has a large surplus stock on hand which it is unable to sell either here or abroad.

There is speculation as to the price which will be paid for tanbark next spring. The peeling season is only 4 or 5 months away. It seems a safe prediction to say that the 1920 price of one cent a pound will hardly be offered, unless there is an increased demand for this particular kind of tannic extract.

District 7 - Eastern District (Cont.)

Sleet Storm in Virginia: The sleet storm which passed over the Natural Bridge Forest region November 15 and 16 was the worst in the past twenty years. It started to rain on the night of the 14th and continued to rain through the 16th. Ice started to form on the trees above an elevation of 2,000 feet on the first night and continued to form until it stopped raining. The lowest elevation affected was about 1,000 feet. Considerable damage was done on some of the timber sale areas by the uprooting and breaking of seed trees and immature timber. On some trees the limbs were completely stripped from the trees; others were snapped in the middle and some were uprooted. The damage to timber on National Forest land will amount to at least $100,000. Besides the actual damage in breakage, there is the added damage which will eventually result from the "chestnut blight" which will infect many of the trees which are now only slightly injured. This will have quite an effect on the marking on all of the sales inside the sleet affected area.

Poachers Provide Venison for Sick: Two poachers on the Pisgah National Forest hunting preserve Saturday provided a fine feast for the sick and wounded ex-service men at United States Public Health Service hospital at Kenilworth, when they killed two deer and escaped before the warden could apprehend them.

The warden telephoned to District Forest Inspector Rhoades and he went out yesterday, bringing in the carcasses and presented them to the public health service hospital, in order that the boys there might enjoy meals of venison. While the warden did not get close enough to arrest the two poachers, he identified them, he said, and their names have been turned over to the officers of the law.

New Road for Southern Forests: Under the terms of a cooperative agreement between the Board of Supervisors of Botetourt County, Virginia, and the District Forester, four and one-half miles of the Jennings Creek road within the National Bridge Forest will be improved and maintained. It will not only benefit a mountain farming community of approximately 500 people where the tomato canning industry is well developed (there being eleven canneries) but will also be of great benefit to the Forest Service as about 100,000,000 feet of National Forest timber are tributary to it. Buchanan Road District has allotted $2,500.00; the local people $2,000.00 in subscriptions; and the Forest Service has made an allotment of $4,500.00. After completion, the project will be maintained jointly by the County and the Forest Service. Construction will be started in the Spring.

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Fortune smiles at few and grins at many.

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WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

November 15 and 22, 1920.

Keeping Up the Old Spirit

A meeting of all the employees of the Forest Service in the Washington Office will be held at least once a month in the future under present plans of the Forester. The purpose of these meetings will be to keep the entire personnel informed of the more important things which the Service is doing and trying to do. It is an attempt to get back to the old-time familiarity with the work which existed in the days when the Service was young and there was only a handful of employees. The first meeting of this kind was held on November 10 in the Woodward & Lothrop Auditorium. At that time there were heart-to-heart talks by Col. Greeley and Mr. Sherman, in which the intimate family affairs of the Service were discussed. At future meetings it is planned to have short talks by other members on the different phases of the work. These talks will be supplemented by motion picture films illustrative of the work of the Service and allied subjects.

Col. Greeley's address was as follows:

I am very glad to see what a large family we have when we are all together. The season of key-note speeches is happily over and I am not going to attempt anything in the way of a formal talk. It will rather be a more intimate discussion of family affairs.

The Forest Service has a distinct tradition. It is that the work of the Service, its responsibilities, its fights, and its successes are shared by all of us; that these are not simply things which affect a few men at the head of the organization but that they go right down the line and become the concern of every member. It is a tradition of mutual responsibility from the General down to the latest recruit in the rear ranks. That tradition is one of the very precious things that we have; and one of the things that I am most anxious to accomplish during the time that I am privileged to be at your head is to keep that tradition alive and vigorous,--to make it if possible just as effective in the work ahead of us as it has been in the work of the past years.

That is primarily the reason why we are going to have these meetings of the whole family probably once every month. I think it will be well worth an hour of Uncle Sam's time for us to get together once a month and learn as a whole about the interesting things that the Service is doing, about the new responsibilities and duties which the Service is undertaking, and to carry back to our individual desks a fresh interest in the things which the organization as a whole is striving to accomplish. That is the purpose to which we shall devote these monthly meetings and I hope that as a regular practice we can have at each one of them a summary of some interesting and stimulating thing which the Forest Service is doing. We have a tremendous range of interesting subjects and I think it will help us all to get together at least once a month and hear about some of them,--things that doubtless many of you do not come in contact with during your everyday work. But at this first meeting I want to talk more intimately about family affairs.

The tradition of the Forest Service of which I spoke means to me a mutual obligation of the members of the Service to their organization on the one hand, and of the Service to its members and workers on the other. Nothing of that sort can be one sided. We can not carry on and get the team work which is fundamental to an organization like ours simply upon the basis of prescribed authority, upon the obligation of the employee to work so many hours for so much pay, under the orders of his or her superior. That is not the sort of attitude or atmosphere under which the Forest Service can carry on, because we must have a much deeper and much more common realization of our mutual obligations on each side - of employees to the Service and of the Service to its employees - to accomplish what we have got to do.

If you will pardon a far-fetched illustration, I am reminded of something that happened last summer when I was talking to a group of people in one of the isolated country districts of Colorado about the recreational work which the Forest Service was planning to do. I talked with rather large ideas, perhaps, with an excessive amount of enthusiasm, about what the Forest Service is going to do with its lands and its National Forests. I presume I used the pronoun "I" a little too often. At any rate what I said did not set quite right on one of the old-timers in the audience, one of the type of men who have grown up in the country, and he tackled me after the meeting and said: "When you were talking about our National Forests, our public lands, our recreational opportunities, you made me think a little of the time when old Satan took our Saviour up on top of the mountain and showed him the whole universe and said, 'All of these things I will give you if you will but fall down and worship me"; but I tell you the derned old coot did not own a single acre of it."

Now we do not own the National Forests; our title to them rests upon the service which we can make them render. Neither do we own the services of our employees; our title to them rests upon the opportunity which we can give men and women in our organization to play an effective part in the work of the world, to do their best under the conditions necessary for effective work, and to advance them in responsibility in the measure of their ability.

Now this question of the obligation of the Forest Service to its employees is one that I am taking very much to heart these days because I appreciate what you are going through. I know perfectly well that helpful and effective service can not be rendered when the slices of bread are getting thinner every month and the clothes are getting more and more threadbare. I know just what you have been through and what many of our employees in the field have been through, and that in a good many cases it has been almost, if not entirely, a question of actual want for things every one is entitled to have. I want to tell you just what we are trying to do to remedy this situation which is fundamental to our continued success as an organization.

We are very fortunate in having met an extremely receptive attitude on the part of Secretary Meredith toward a radical revision in the salary schedules, and our estimates as they have now gone to Congress will contain a really substantial increase for the first time since our statutory rolls were established--a really substantial increase in the statutory salaries requested. In the clerical grades, for example, the increase will average by and large throughout the Service something over $300; in the mechanical grades the increase averages around $275; in the group of photographic and artistic workers the increase will be something over $375, about that. I cite these to show you about the scale of increases which Secretary Meredith has endorsed in submitting our appropriation estimates to Congress; and really for the first time in a number of years our needs will be squarely and fairly brought before the Appropriation Committees. This is our first line of attack.

Our second line of attack is the general movement with which you are all more or less familiar for the reclassification of employees in the Federal services, accompanied by a realignment of salaries. That movement is still more or less precarious. The report of the Joint Commission for the Reclassification of Federal Personnel made last year is reposing in the dusty pigeonholes of one of the Congressional Committees. That Committee is, however, having prepared a new classification in which the old material will be used to a large extent and a new bill embodying many of the features of the bill recommended by the Joint Commission; and has even gone so far as to secure tentative promises from some of the Appropriation Committee chairmen that their new classification with its scale of salaries will be used in making up the appropriation bills during the process of grinding them out through Congress. The great difficulty with this joint movement for the reclassification of Federal employees is that there are so many conflicting views being expressed, so many wires being pulled, so many questions being asked as to whether this or that particular change is necessary, that I am doubtful whether it will come to a successful issue, although I am doing everything possible to harmonize the conflicting views and create a uniform sentiment behind some simple and workable measure. If such a measure is adopted as is now being prepared for consideration by the House Committee on Reform in the Civil Service, it would mean a substantial increase in salary in the great majority of cases, but owing to some of the rules which will probably be laid down governing the rate at which salaries may be advanced and the particular salary rating to which each employee may be allocated in the first instance, it would not be possible to deal justly with every employee. There will be a certain number of cases where employees are not advanced, if that bill is passed, as rapidly as they should be. It will, however, provide for a graded system of promotions under which, within possibly three years at the outside, all of our employees could be brought up to a salary which I would regard as adequate or nearly adequate.

So we have these two distinct efforts before Congress: first, our own appropriation bill which carries definite and specific increases, and second, the Joint Reclassification movement which we are backing as hard as we can because it is a just and necessary change applicable to all of the governmental organizations, a change which sooner or later must be brought about if our whole Civil Service is to retain any approximate standards of efficiency. As between the two I have somewhat greater confidence in our own bill because that is a specific limited measure applicable to the employees of our own organization and does not raise the innumerable questions which are raised by the Joint Reclassification measure. But we are working our hardest along both of these lines, and I want to assure you that there is nothing which I and my associates in the direction of the Forest Service are carrying so close to our hearts as this question of securing an adequate revision of our salaries. I do not want to give you any false hopes. I am not over-confident. I can not foretell just what the attitude of Congress will be. We are still in the midst of a general campaign for Federal economy. Our newspapers are now carrying the latest estimates of the Secretary of the Treasury showing that four billion dollars in revenue must be provided yearly for the next three years in order to meet the obligations which the Government has already incurred. In the face of a general demand like that it is to be expected that Congress will be guided by a policy of economy and that is going to make our task difficult. We also are being told that the peak of high prices is past and that prices are dropping. I do not know whether any of you have sensed that in your monthly bills; I know that in mine it has not been appreciable. But at the same time that is an argument which is going to be made against increases in Federal salaries--that there will now be a steady reduction in the cost of living, that the purchasing value of the dollar will go up,--in other words, that the necessity for increases in Federal compensation is past. I think myself that that is nine-tenths a specious argument, because I am satisfied that the reduction in prices which will doubtless proceed will come so slowly that it will be a great many years before we are back on the purchasing value of the dollar in accordance with which present salaries were fixed. But whatever the difficulties are, we are doing our best and we have the finest kind of backing in the Secretary of Agriculture.

There is one other matter in this connection that I want to speak about, and that is the plan followed in the Forest Service for determining the order of promotions in the various statutory grades as vacancies occur. You all know about the efficiency register. I have been greatly concerned of late over the reports brought to me that the efficiency register does not have the respect of the employees whose names are on it. In other words, that though it purports to be a fair and impartial rating of the various employees, yet those same employees do not have confidence in it. To what extent that attitude toward the efficiency register is true I do not know, but I am determined that in the process of making it up we shall go just as far as it is humanly possible with a mechanical device of that sort to make it fair and to make it hold the respect of all of you whose names are on it who will take the pains to study the situation carefully. To do that we have instituted certain changes this year which I want you to know about. In the first place, we are going to have the individual efficiency ratings checked by the rating officers together in the presence of the Efficiency Committee, in order to bring up any ratings that may be out of line before the scrutiny of all the rating officers and to make the person who made that rating defend it, whether it is too high or too low. By that means we are going to try to eliminate this question of ratings which are not uniform as between different organizations. As a second step we have put into existence a Rating Committee made up of employees on the register from the clerical and sub-technical grades. This Rating or Advisory Committee will make up its own efficiency register and give it to the Efficiency Committee as its recommendation on how the employees on the register should be graded, and the chairman of that Advisory Committee himself will be a member of the Efficiency Committee which will make up the final ratings.

Now this plan is not necessarily final, but I do want to work out the best means not only of getting fair ratings with an efficiency register which you will respect because you believe by and large that it is fair; not only that, but I want to have the employees who are on the register share in the responsibility of making it. I want you to feel that you have a part in it; that if it is wrong there is a responsibility upon you, as well as the higher officers of the Service, to correct it. That is my point of view in approaching this whole question. If the method we have devised for the next efficiency register does not accomplish those results, I want to find some method that will.

I want to say this in conclusion: that the Forest Service is different from other Federal organizations and the difference is principally in this,--that we have not got an upper crust and an under crust. People have moved through the Forest Service from positions of low responsibility to positions of higher responsibility faster than in any other Government organization I

Keeping up the Old Spirit (Continued)

know of. I like to think of our two District Foresters who entered the Forest Service as Forest Guards. I like to think that they symbolize the opportunity which the Forest Service offers to its employees. I like to think of the people who have been trained in the Forest Service in executive or technical work and then have had opportunities, in the Government service and outside the Government service, for positions of much greater responsibility for which their years in the Forest Service gave them the necessary training. I like to think of the Forest Service as a large family and I hope that we can keep this distinction,--that in these particulars at least the Forest Service will still be different. I want to ask you to help me in maintaining this standard.

Up Goes the Editor!

An extract from Memorandum No. 331 of the Office of the Secretary makes the following pertinent announcement:

"Mr. John L. Cobbs, Jr., in charge of Information work of the Forest Service, has been appointed Chief of the Division of Publications."

The Forest Service has assented to this change with extreme reluctance, for it leaves a gap that it will be hard to close up, but with regretful recognition that the work of the Division of Publications, involving as it does the whole range of the publications of the Department of Agriculture, the Press Service, the Motion Pictures, and Fairs and Exhibits, will give scope for the full exercise of Cobbs' ability and talents and furnish him with an even larger opportunity for public service. For the Forest Service there is also an inspiring side to the situation; for it means that the Department looks with favor on the Forest Service way of doing things and is glad to have men trained in that way take hold of Department work.

Fourteen years ago down in Sewanee University, John L. Cobbs played football, wrote stories for the college paper, and dreamed of a writer's career. Those stories are still remembered by the graduates of his day because of the originality of their plots and the quality of their style. There was a flavor about them that made them different, a flavor that came from a personality at once strong and wholesome, sympathetic and original.

Along with his love of literature Cobbs had a passion for the out-of-doors, and for his themes he turned naturally to the woods. This love of nature finally led him into the practical work of forestry, and after graduating from Sewanee and the Michigan Forest School, he entered the Forest Service. For twelve years now he has taken an energetic, enthusiastic part in forestry, from the time when in 1908 as a Student Assistant he carried a pack into the Montana hills with a surveying party or singed his eyebrows on the fire lines until he took charge of Information in Washington and combining his knowledge of woods work and of writing gave a new impetus to the Information work of the Service.

During all that time, as he went through the various lines of work as Forest Assistant on the Flathead, Forest Examiner in the Appalachian work, and Forest Supervisor on the Arkansas, his interest in writing continued. When he began active writing again the flavor that had marked his earlier work was enriched by the results of many years of study and experience in the two best schools in the world - the woods and the Forest Service. He goes to his new work as Chief of the Division of Publications in the Department of Agriculture with every quality needed for success and with the best wishes of the organization into which he has put so much of himself.

The Weekly Bulletin is hit very hard by Mr. Cobbs' going, for he has been chiefly responsible not only for its preparation but for whatever it has had of attractiveness and individuality. The gap that has been left in the office by his going is of such proportions that, at least until his successor is at the desk, there is some danger of the Bulletin slipping into it and being entirely lost to view for a period.

W. I. Hutchinson of the Denver Office is to take over the Information work in Washington and is expected to be on the job about the middle of December.

State Foresters' Meeting at Atlantic City

On November 12 and 13 a meeting of State Foresters was held at Atlantic City, New Jersey, with the specific object in view of finding common ground upon which the States could support the program of the Forest Service. Sixteen States were represented, including Connecticut, Illinois, Iowa, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Vermont, and Virginia. Upon the invitation of the State Foresters, Colonel Greeley, with Mr. Carter and Mr. Peters, attended from the Forest Service, and made a statement in elaboration of the recommendations contained in the Forest Service report on the Capper resolution regarding cooperation between the Federal Government and the States in forestry work, at the same time explaining in detail the basis upon which it was proposed to distribute the fund that may be made available by Congress. The definite result of the meeting was a declaration approved by thirteen of the representatives present, which read as follows:

"As a result of a conference of State Forestry officials held at Atlantic City, November 12th and 13th, 1920, for the purpose of considering the question of National Forestry legislation, and attended by officials from sixteen of the thirty-four State Forestry Departments, we, the undersigned, as heads of the Forestry Departments in our respective States, fully endorse the recommendations of the U. S. Forest Service, relating to cooperation with States in fire protection and forest renewal, as embodied in the report on Senate Resolution No. 311, known as the 'Capper Report.'

"We therefore urge upon Congress the enactment of the legislation necessary to make those recommendations effective, accompanied by suitable annual appropriations, which, for the fiscal year ending June 30th, 1922, should not be less than one million dollars, ($1,000,000), to be expended by the Secretary of Agriculture in cooperation with the several States, for forest fire prevention and control, forest investigations, and timber production including forest planting."

Pennsylvania voted "no." Maine and Vermont were counted as not voting. In the case of Maine, the representative did not appear to have the necessary authority from the State Forest Commissioner to give definite approval, while in the case of Vermont, the State Forester desired additional information before giving his approval to any plan.

It was further decided that a committee of State Foresters should attend a hearing by the Appropriations Committee of the House of Representatives, that all other State Foresters and Forest Commissioners should be urged to join them, and that each State organization should secure also support for the effort by having farmers and representatives of other interests attend at the same time.

As an outcome of this conference, it was unanimously agreed to form a State Foresters' Association, and a committee was appointed to submit a program at the meeting to be held at Harrisburg in December.

A memorandum containing the above information has been sent by the Chairman, Alfred Gaskill, State Forester of New Jersey, to every State Forest organization in the country with the request that they file with him a formal approval or other decision.

J. G. PETERS.

Federal and State Cooperators in Conference

On Monday and Tuesday, November 15 and 16, a meeting of the eastern Weeks Law Collaborators and State Foresters was held in the Atlantic Building. Twelve of the eighteen eastern cooperating States were represented, in addition to two where cooperation is not in effect, as follows:

Parker Anderson, Supervisor, St. Paul, Minn.
F. W. Besley, State Forester, Baltimore, Md.
R. D. Forbes, Supt. of Forestry, Department of Conservation, New Orleans, La.
C. W. Harding, Forest, Game, and Fish Warden, Elkins, W. Va.
J. S. Holmes, State Forester, Chapel Hill, N. C.
W. G. Howard, Asst. Supt. State Forests, Albany, N. Y.
M. C. Hutchins, State Fire Warden, Boston, Mass.
R. Chapin Jones, State Forester, Charlottesville, Va.
George L. Lusk, Secy., Public Domain Commission, Lansing, Mich.
R. S. Maddox, Forester, State Geological Survey, Nashville, Tenn.
Arthur F. Oppel, Silviculturist, St. Paul, Minn.
Edmund Secrest, State Forester, Wooster, Ohio.

R. Y. Stuart, Deputy Commissioner of Forestry, Harrisburg, Pa.
Neil L. Violette, Deputy Forest Commissioner, Augusta, Me.
C. P. Wilber, State Firewarden, Trenton, N. J.
George H. Wirt, Chief Forest Fire Warden, Harrisburg, Pa.

The purpose of the meeting was to get the Weeks Law Collaborators together for a discussion of the details of the cooperative work and the various problems involved. The subjects for the most part were assigned to the out-of-town men and a general discussion was encouraged in order to bring out the important features of the work in the various States.

Monday night the visiting foresters and members of the Forest Service met at the Cosmos Club for an informal dinner, after which Mr. Sherman and Col. Graves spoke. Following this, motion pictures, prepared for and used by New York and Pennsylvania in their fire prevention work, together with a Forest Service film showing airplane fire patrol, were shown.

PROGRAM
WEEKS LAW COLLABORATORS' MEETING

Monday, November 15

Address of Welcome .... Col. Wm. B. Greeley

Federal Policy Governing Cooperation in Fire Protection under the Weeks Law .... J. G. Peters

Forest Fire Statistics .... L. S. Murphy

Federal Inspection .... J. A. Mitchell

State Fire Protection Policies in Regard to:

Scope and Purpose of State Effort .... G. H. Wirt
Chief Forest Fire Warden, Pennsylvania

Local Responsibility .... C. L. Harrington
Commissioner of Conservation, Wisconsin

Responsibility of Timberland Owners .... W. G. Hastings
Chief Forester, Vermont

Other Work of the Department .... George L. Lusk
Secretary, Public Domain Commission, Michigan

Monday Evening

Get-Together Dinner at the Cosmos Club.

Tuesday, November 16

Publicity and Education:

Publicity Propaganda .... R. D. Forbes
Superintendent of Forestry, Louisiana

Forestry Associations .... J. S. Holmes
Forester, Geological and Economic Survey, North Carolina

Extensive Patrol .... E. O. Siecke
State Forester, Texas

Cooperation;

Local (County) .... R. C. Jones
State Forester, Virginia

Private .... C. W. Harding
Forest, Game, and Fish Warden, West Virginia

Interstate .... J. B. Mowry
Commissioner of Forestry, Rhode Island

Federal and State Cooperators in Conference (Continued)

Administration:

Supervision .... F. W. Besley
State Forester, Maryland

Inspection .... N. L. Violette
Deputy Forest Commissioner, Maine

Local Organization .... W. O. Filley
State Forester, Connecticut

Motorized Fire-Fighting Equipment .... M. C. Hutchins
State Fire Warden, Massachusetts

Regulation:

Compulsory Slash Disposal .... A. F. Oppel
Silviculturist, State Forest Service, Minnesota

Law Enforcement .... C. P. Wilber
State Fire Warden, New Jersey

Fire Plans:

Purpose and Importance .... W. G. Howard
Assistant Superintendent, State Forests, New York

Utilization of Land Classification Data .... J. H. Foster
State Forester, New Hampshire

Progress by States

Inter-Departmental Alaskan Committee

At the call of Secretary of the Interior Payne the first meeting of an Inter-Departmental Advisory Committee on Alaskan Affairs was held in Washington on November 19 with the following Department representatives present:

Navy, Captain W. C. Cole; War, Colonel Clarence O. Sherrill; Interior, Mr. George A. Parks, Mineral Examiner of the Field Division from Juneau, Alaska; Post Office, Mr. James B. Corridon; Commerce, Dr. Hugh M. Smith of the Bureau of Fisheries; Shipping Board, Mr. H. Y. Saint; Agriculture, Mr. E. A. Sherman. In addition, Dr. Alfred Brooks of the Geological Survey was present and at the request of the members of the Committee remained and participated in the meeting in an advisory capacity.

Secretary Payne called the meeting to order and spoke a few words to the members. He stated that, with reference to the future management of Alaska, there were two general plans. One looked to extending the jurisdiction and authority of the Government in Alaska, and the other looked to a simplification and betterment of methods by the Government in Washington. He stated that, after his visit to Alaska and after full mature consideration of the problem, he felt that it was impractical to follow the first method. Therefore, the alternative suggested itself. He said that the form of organization had been considered and his conception was that we should meet as an independent body purely in an advisory capacity, the various Departments having equal representation and the Committee in no way taking over or infringing upon the work of any of the Departments or their various Bureaus. He stated further that it had been suggested that the Committee be created by Executive Order more formally calling it into being and outlining its duties and jurisdiction. This was the matter which he would like to have us consider, and he left it entirely in the hands of the Committee. Secretary Payne then withdrew from the meeting. Secretary Payne's statements were generally interpreted by those present as indicating his belief that the proposed Alaskan Development Board was either unwise or that legislation creating such a Board would fail of enactment. This served to emphasize the urgent need of an Inter-Departmental Committee.

The Committee selected Mr. Parks of the Interior Department as temporary chairman, and Mr. Corridon of the Post Office Department as temporary secretary. There was considerable discussion regarding the form of organization and method of creating it. This discussion seemed to crystallize into the quite general opinion that the Committee should be established by Presidential proclamation. A sub-committee, consisting of Mr. Parks, Mr. Saint, and Col. Sherrill, was appointed to draft a definite plan of organization, with instructions to be in readiness to report November 23.

At a second meeting on November 23, it was decided that the Committee should be formally created by an order of the President, and the proclamation was drawn up for presentation by Secretary Payne to the President for his approval. This order would provide for representatives on the Committee from the U. S. Shipping Board and the Federal Power Commission in addition to those from the Executive Departments. It would also define the functions of the Committee as purely advisory and bearing a relation to other organizations which conduct activities of this kind similar to that of the Board of Maps and Surveys.

That Troublesome Grazing Report!

In a recent circular letter addressed to the Supervisors in District 6, Assistant District Forester Kavanagh, Chief of Grazing for that District, has taken up the matter of the annual grazing report in a way that carries with it an unusual appeal. Inasmuch as it meets to a very full degree the views of the grazing men in the Washington office concerning the importance of the annual grazing report and the manner in which it should be prepared, and in order that all supervisors and rangers interested in this phase of our work may have the benefit of Mr. Kavanagh's statements, the following extract from it is published:

"In discussing the preparation of this report with the field men, I have found some of them in a frame of mind in regard to the annual grazing report somewhat similar to that which I imagine a man would have who had been given a jail sentence at hard labor.

"The report, however, is needed both in this office and the Forester's office, and since it must be prepared, let's go about its preparation not with the idea that it is a task to be gotten over with as soon as possible but as just one of our jobs which we can make a great deal of if we so desire.

"As a matter of fact, the annual grazing report is and should be a story of accomplishment, of economic conditions as reflected by the stock business, and sufficient statistics to enable the officers concerned to readily grasp the conditions and act accordingly. This is true from ranger to Forester. As the ranger's report is, so also is the Supervisor's. If both are good, this office and the Forester's office receive a better, clearer understanding of your problems and you place us in a position to give you the advice you feel you need.

"The more plain, straight-forward information your report contains, the more valuable it is, If you can imagine that you are telling some sympathetic listener about your grazing troubles when you are preparing your report it won't seem so much of a task. Furthermore, you are more apt to include mention of matters that are in need of correction, and it is primarily these very matters we are most interested in. You have undoubtedly accomplished something this year in progressive range management. Let's hear about it. Tell us about stock and range conditions inside and outside the Forest. Give us the human interest side of the work and you will find it easier to write your report, and we will get just that much more out of it."

WILL C. BARNES.

The Relation of Job-to-Job to the Motor Car

There has been a continued resistance in Forest Service overhead to the introduction of the motor car into Service work. The arguments are varied and numerous and range from a statement I once heard from a Chief of Operation that we were "organized on a horse basis" and therefore no change should be made, to the statement that the use of autos makes a ranger "soft and lazy."

Let us admit at the start that in very few cases can the auto supplant the horse, and that its use must be supervised. Morrel and Headley have computed the cost of effective time and suggested remedies from a general application of high life to efficiency courses; but no mention has been made, so far as I know, to the use of autos as a means of increasing effectiveness.

The Relation of Job-to-Job to the Motor Car (Continued)

Industry has recognized that an executive whose work requires travel can with the auto devote approximately 30 per cent more time to the actual work than was possible before its introduction. Every ranger who operates a car for Government work is contributing a very substantial sum each year in order to do more efficient work. It is time to stop penalizing him. My experience leads me to the conviction that the Service should start at once to motorize its force as an effective means of keeping pace with its increased business.

M. A. BENEDICT.

Manzano Forest Throws Down the Gauntlet

"In about September, 1689, Domingo Jironza Petros de Cruzate, Governor and Captain General of the King of Spain, granted to the Isleta Indians a strip of land extending from the Rio Grande del Norte to the espinosa del Sierra Sandia - that is, to the 'backbone' of the Sandia Mountains. One hundred and seventy years later an American surveyor, being apparently loath to drag a chain through rough, timbered mountains, meandered along the foothills on an offset, but miscalculated the offset by several miles. Fifty years later still the Isleta Indian woke up to the fact that the Manzano National Forest was claiming this strip between the old meander line and the backbone of the mountains.

"The Indians appealed to the Government and the Secretary of the Interior decided that the disputed area belonged to the Indians as they were not bound by an erroneous survey. A resurvey was ordered which has now been made but not yet approved. Until the survey is approved the Forest Service will continue administering the area.

"Unquestionably the Isletas have the oldest squatters claim in the Manzano Forest, for the grant by Captain General Jironza was merely a recognition of a claim established ages before. According to Isleta tradition, their forefathers had used this land so long ago that twenty-three generations had already passed when news was brought to the Pueblo that some strange people, white as snow, with houses built on boats and the boats with wings, had come to our country.

"On February 4, 1750, the Isleta tribe purchased the Lo de Padilla Grant to the south of the Isleta Grant, and have owned it ever since.

"We defy any National Forest to come forward with a land claim that originated twenty-three generations before Columbus discovered America, or about the year 700 A. D. Let us thank a kindly Providence, however, that the correspondence doesn't go back that far."

Extract from the Manzano Ranger.

An Alaskan Fire Wind

Yes, we do have forest fires in Alaska, and winds also. Here are a few facts about some that occurred on Turnagain Arm, on the Chugach Forest, on June 10, 1919.

The fire had been burning about one hour when Ranger Haneman and I arrived on the scene, having come on foot directly from a small fire which occurred at Kern Creek the day previous. Upon our arrival we found that Guard King was on the job, having arrived about 20 minutes after the fire started. The fire was being fanned by a very strong "up-Arm" wind, and any effort at controlling the fire would have been not only useless but foolhardy, since it was traveling at such a terrific rate of speed that it would have quickly overtaken any creature in its path not equipped with wings.

Ranger Haneman therefore went to assist in saving a wood-cutter's personal belongings, which they loaded on a push car and moved up the railroad track, a distance of half a mile, into a gravel cut. These belongings were later picked up by a whirlwind and burned, leaving the wood-cutter with nothing to show for his winter's work except the clothes he stood in--which, by the way, did not include coat or hat. While Haneman was thus engaged, I assisted in an effort which was being made by eight or ten men to save a sawmill, lumber yard, and large quantity of railroad ties and piling which were stacked beside the track and which belonged to the Alaskan Engineering Commission.

A large gasoline pump with 6-inch suction pipe had been installed earlier in the season as a protective measure for the property, but among the Commission men present there was no gas-engine man. Having had some experience in the past in cranking cranky Fords and Evinrudes, I succeeded in starting and operating the pump until relieved by a steam-shovel engineer. Immediately after the arrival of the engineer things began to happen which, literally translated, amounted to three distinct cyclones accompanied by numerous small whirlwinds. The engineer and I took refuge under the floor of the sawmill while the first "twister" was in progress, and before being blinded by cinders and sawdust I was able to observe part of what was taking place.

Two box cars that had been abandoned to the flames were blown from the side track a third of a mile up the track, which at this place is on a water grade. Cross arms on telephone poles were twisted around the poles. Railroad ties, cordwood, and tree tops were traveling through space with a whirling motion, and some of this debris attained a height of 400 feet or more. I distinctly saw a tree top 8 inches in diameter at the butt light end-on within three feet of a man and then topple away from him.

After the first "twister" had spent itself, we thought the worst was perhaps over, so the engineer and I went back to the pump, which we found temporarily out of commission, the 30-gallon gasoline tank having been blown off the pump. We found the tank standing on end in the water hole, dragged it forth and were endeavoring to make temporary repairs when the second cyclone hit us. Thereupon a foot race took place between the engineer and myself, which I am likely to remember for a long time.

Two days previous to this, I had sprained the tendons of my right leg in endeavoring to follow Mr. Haneman, who has the proclivities of a greyhound for speed, to a fire. Prior to the time the second cyclone hit us I was absolutely positive that a slow, limping stride was the very best I could do, but when the emergency arose I surpassed all previous records for speed and finished the race a very close second.

This fire destroyed $125,000 worth of lumber and equipment belonging to the Alaskan Engineering Commission, but from a silvicultural standpoint there was practically no loss. In fact, the fire resulted in cleaning up a fire trap which would no doubt have resulted in loss to reproduction later on.

--C. T. Beach, Supervisor.

How to Tell Birch, Beech, and Maple Apart

Birch, beech, and maple are very similar in appearance, and have approximately the same weight. Hence it is comparatively easy to mistake one of them for another. A method which anyone can use to distinguish them is suggested by the Forest Products Laboratory. This is based on the relative width of the pores and medullary rays in the three woods.

If the end grain of birch, beech, or maple is cut smooth with a sharp knife and examined with a hand lens, the pores will be seen as tiny holes distributed fairly evenly over the surface, and the medullary rays will appear as narrow lines of a different shade running at right angles to the growth rings.

In beech some of the rays are very distinct even without a lens. The large rays are fully twice as wide as the largest pores.

In maple the rays are less distinct, and the largest are about the same width as the largest pores.

In birch the rays are very fine, invisible without a lens. The pores are several times larger than the rays, usually being visible to the unaided eye as minute holes on the end grain and as fine grooves on dressed faces of the board. The pores in birch are considerably larger than the pores in beech or maple.

The appearance of the medullary rays on a "quartered" surface is also distinctive. Here they appear in beech as distinct "flakes," the largest being between 1/16 and 1/8 inch in height when measured along the grain of the wood. In maple they are considerably smaller, rarely attaining a height of 1/16 inch. In birch they are comparatively inconspicuous.

--Technical Notes, F.P.L.,

The Allen Storm Detector

One morning last March in San Francisco I met Clay M. Allen, Telephone Engineer of District Six. During a discussion which followed concerning various things, he very casually remarked that for some time previous he had been thinking pretty strongly about the design of an electrical device which would predict the approach of lightning storms well in advance of actual occurrence.

The Allen Storm Detector (Continued)

Now readers, it will be agreed, I think, that telephone engineers are quite regular human beings. We all chase rainbows now and then. It was thought at the time that Mr. Allen was hot-foot on the trail to the pot of gold, not because the idea was one of doubtful merit, but because the possibility or probability of materialization of the machine struck us as being pretty remote.

A mistaken lack of confidence in Mr. Allen's stick-to-it-tiveness was this morning proved. A real surprise was sprung when the finished instrument was exhibited in Mr. Allen's office. He had found the pot at the foot of the rainbow--whether or not it contained gold or only yellow dust of course is yet to be determined by experiments Mr. Allen will conduct during the ensuing season. The gate to a big unexplored field of investigation has been opened.

The instrument--what does it look like, who made it, and where? Answering these questions in reverse order. It was made in San Francisco by a Mr. Hanscom, a Consulting Electrical Engineer, after a design worked out by Mr. Allen and Mr. Hanscom. It looks like a thousand other electrical devices commonly seen in catalogues of electrical goods. The various parts are mounted on a board about 18 inches high and 11 inches wide. The only part recognizable to a layman is a doorbell of common type, exactly like the little electrical bell in your kitchen which announces the arrival of the book agent and rent collector at the front door. The bell on the "Allen Storm Detector" is expected to announce the probable arrival of an evil doer quite as much of a bugbear to a Forester as the book agent is to his wife.

The instrument, which will be connected to an antenna, is made up of many parts less plebian in electrical aspect than the doorbell. Through these sensitive devices the electrical waves drawn from the static charge of the air by the antenna are juggled about before reaching the bell. Static charges of normal volume will have little or no effect upon the machine. An abnormal volume of electric pulsations will set the little points and jumpers in motion, and they will continue to respond in more or less agitated manner until the amperage from the antenna becomes sufficient to ring the bell. The bell's activity will continue until the storm passes or until the instrument and antenna are separated by the opening of a switch. It is expected that at the first ringing of the bell, the operator at the receiving station will "wireless" the news of the approaching storm Forest-wide. Every fireman will stand on his toes ready to hit the little fires which may start from the lightning bolt after strikes have occurred six or seven hours later.

The next step will be the creation of huge conductors of some sort at various points about a Forest to drain the air of electric charges of great volume. Several years ago the "Literary Digest" reported the construction of a battery of lightning rods near a certain valley in France which had for centuries suffered from destructive electrical and hail storms. The story went on to say that the rods not only drained the air of electricity but reduced the severity of the precipitation of hail. We will be fully satisfied to have the precipitation; therefore our problem is only half as great as that of the Frenchman. What a battery of poles will be required to encircle northern Idaho!

--E. W. KELLEY.

Sheepmen Gain by Using Our Methods

In reviewing the Supervisor's annual grazing report for the Cochetopa Forest it is interesting to note that, though the season on the sheep ranges, particularly the higher portions, was very unfavorable for forage growth, no precipitation occurring between the middle of May and the middle of July, those flock masters who followed improved methods of handling their sheep without exception produced heavier lambs than those who followed the old method, the increase in weight varying from two to five pounds per head.

In making an inspection of the range during the summer, the Supervisor found twelve different outfits following the bedding-out system. On the other thirty-five allotments visited, he found the old system of management being followed. However, after carefully explaining the bedding-out system and the beneficial results to be secured, the stockmen readily agreed to adopt the improved system. The rangers' grazing reports show that 75 per cent of them actually practiced this system during the remainder of the season. The report further shows that those stockmen who did not follow this system produced the lightest lambs grown upon the Forest, the weights of these lambs being much below the weights for former years.

Of the twenty-five outfits for which the weights of lambs were reported, the lambs sold by Mr. Eugene Williams, a former Forest Supervisor of this Forest, top the list by about five pounds per head. This increase, computed on the minimum price of 10 cents per pound, amounts to about 50 cents per head, which in itself would go a long way toward meeting annual operating expenses.

Is there any further argument needed to support the plan of management the Forest Service has advocated for several years?

--J. W. WILSON

Our Letter Box

Dear Editor:

Anent Efficiency Bill's Efficiency, I am constrained to remark: Well, Gee Whiz! Poor Bill with his 75,000 acres, a dozen special uses, fifty miles of roads and trails, thirty ditto telephone lines, 750 head of cattle, and six small timber sales.

Bill dear, I don't know who you are or from whence you came; but I do know that you are not a District 5 Ranger, because such a thing as a 75,000-acre District has ceased to be if there ever was any such thing. Multiply that area by five and you will approximate the average of the average Ranger District out here.

I am going to sketch briefly the activities on one ranger district on the Inyo, the smallest district by a hundred thousand acres that there is on the Forest, and I want to preface my remarks with the information that Old Asbestos is administered by rangers who are in process of breaking in, winning their spurs, showing if they have the making of a real district ranger in them. Once they are broke to a hackamore and spurs and taught to stand without hitching, they are transferred to a real Forest and given real work and responsibilities.

Bear in mind, Bill, that the following activities were performed or supervised by one District Ranger on the smallest district on this poor ridiculed Forest, and have we heard any noise that sounds like overwork? We have not. Such noises don't occur out here.

The area of this small District is 350,000 acres. The altitude ranges from 6,000 to 14,000 feet. A.S.L., the Ranger, weighs some 220 pounds; so you can see that he is not overly active. His wife approximates the same weight and is a great help to him. He actually performed or supervised the following work the summer of 1920:

Counted into the summer ranges 3,700 cattle under paid permit, and an equal number grazed under regulation G6 or G7. The ranges are separated by a distance of 60 miles, from one end of the District to the other. He likewise counted in 12,000 sheep to the summer ranges.

He supervised the construction of nearly five miles of real road that cost approximately $5,000, he personally assembled men and materials, hauled them 50 miles, attended to the purchase of necessary camp equipment and food, constructed the camp, arranged all sanitary conveniences, fired two agitators, completed the job, and put all material and equipment away for the winter.

There is only one little sawmill in this Forest. It cut a measly six hundred thousand feet of lumber. The scaling and supervision required less than three days of his time. Mere bagatelle! There were only ten other small sales in his District, but he did not have any help on them. All the brush is burned and all the areas are cleaned up.

He supervised the construction of a telephone line; only 5 miles, though, didn't amount to much; only had to haul the equipment 50 miles. There are in his District 150 miles of road, 175 miles of trail, three highly improved public camp grounds, miles of fences, 55 special uses, 67 free-use permits issued.

He helped to pack into the high country and plant 200,000 trout fry, piloted into the same country a movie outfit, and kotowed to some 50,000 tourists who asked some million questions.

He cut and hauled, or purchased and had hauled, some 20 tons of provender for our horses, and all he has to do is to toast his feet, feed the horses, dig willows and irrigation ditches, etc. all winter. Lucky dog!

He said all summer that he wished he could get these small jobs that didn't amount to anything off his hands so he would have time to accomplish something.

He arrested, prosecuted, and convicted two fire-trespass cases, and convicted five men for the violation of the game laws; posted fire warnings, etc., pretty well over the District; plowed through 16 inches of snow for a mile to save a cat that had been overlooked and left behind when he moved from his summer to his winter quarters; cut his winter's fuel and hauled it 10 miles to his winter station; and he is now working on his annual grazing report, but pushing a pencil strained his back and he had to lay off and go to grubbing willows out of the upper field. Only for fear of hogging the Bulletin space I would continue this sketch; but space forbids.

It appears to me as though Bill could put in the principal part of his time fishing, and attend to his work as recreation. --H.H.S. Inyo.

District 1 - Northern District

An unusually successful experiment with the radio (wireless) telephone has just been concluded at Butte by R. B. Adams, Telephone Engineer of the Forest Service, in cooperation with the Montana Power Company, a record range having been established for communication by wireless. Mr. Adams took a high-power set and a low-power set of the radio instruments used by the Forest Service to Butte and placed them on the hill in the mineral zone where the high tension lines affect the atmospheric conditions in such a manner as to make the situation exceedingly difficult. The antennae of the Montana Power Company were used in the experiment. Communication was established with the Montana State College at Bozeman, with amateurs at Helena, Great Falls, and Thompson Falls. Victrola music records were used to establish the communication further and were heard as clearly as the note of a bell in Thompson Falls, 220 miles by airline, at Bozeman, 110 miles by airline, and in Helena so clearly that the people on the other end were able to lay down their receivers and dance to the music. The splendid success of the experiment, made under adverse conditions, was very gratifying to Mr. Adams and the radio engineers of the Montana Power Company who participated. The maximum radius of former experiments has been 70 to 75 miles.

District 2 - Rocky Mountain District

Inspector of Grazing W. R. Chapline spent November 3, 4, and 5 in the Denver Office of Grazing going over matters pertaining to grazing-studies work.

James F. Lawson, who has been in charge of the Office of the Solicitor in this District, has been transferred to Washington as Assistant Attorney in the Federal Power Commission. He will be succeeded in Denver by Walter J. Ise of the Solicitor's Office in Washington.

L. H. Douglas, Inspector of Grazing, has taken charge of the Medicine Bow National Forest as Acting Supervisor, for a three-months' period beginning November 7.

The Colorado Stockgrowers Association will hold its annual meeting in the city of Denver on December 21 and 22 at the convention hall of the Albany Hotel. Special attention will be given to a revision of the constitution and by-laws; to the consideration of any matters pertaining to growing, feeding, and marketing of livestock; to National and State legislation for the promotion of the interests of the livestock producer and consumer, and any other business that may come before the Association. The meeting is called this early in order to take action on matters which are intended to be presented to the State Legislature.

From all indications, there will be strong recommendations brought before the State Legislature asking for a closed season on deer for at least five years, and it is hoped that legislation will be secured accordingly. The State Game Department is prepared to urge the matter as well as the State Game Preserve idea, and a number of sanctuaries are being selected in cooperation with the Forest Service to be recommended for such use. The outlook appears to be favorable for constructive game legislation at this session of the Colorado legislature.

The Bear Creek project on the Harney Forest was the first classification project undertaken in District 2. Practically all of the project was classified as listable, but only a few hardy farmers have ventured to establish themselves within its borders. This failure has served to emphasize the over-liberal attitude which was taken in the original classification and plans are now being made to effect a reclassification which will remove from entry land that is clearly not wanted for farming purposes. It becomes more evident all the time that the strength of our classification lies in its having kept well ahead of economic development, so that lands which gave a farmer a reasonable chance for success have long since been open to him.

More than 1,500 visitors registered their names at the Devil's Head Fire Lookout, Pike National Forest, during the past summer. This lookout and the observer, Miss Helen Dowe, have probably received greater publicity through the news and rotogravure sections of papers and National magazines than any other similar station in the United States. An auto camp has been established by the Service at the foot of Devil's Head Mountain, so that it is now possible to motor over good roads to within a mile of the summit, the remainder of the distance being covered by trail. This trip is one of the most popular one-day excursions from Denver.

District 2 - Rocky Mountain District (Continued)

The Denver Club of the U. S. Department of Agriculture was organized on November 5, with the District Forester as Chairman for the rest of the calendar year. This Club consists of representatives from each Bureau and Division or Office of the Department of Agriculture located in Denver, where there are more Government offices than in any other city in the United States except Washington. The object of the Club is the promotion of the general good of the Department, the welfare of its members, and better acquaintance with one another, through social intercourse and cooperation.

Regular meetings, in the form of a "get together" luncheon, will be held monthly, and it is planned to have at these gatherings a program of talks conducted by members of the Club in Denver and other cities in Colorado.

District 4 - Intermountain District

The immense amount of seed which has to be spread over the Forest in order to start a new stand of trees is shown in the results of some examinations made last summer on the Payette Forest, where, during the last seven years nearly 90 per cent of the trees which were one year old seven years ago have died and where even the trees which we usually consider firmly established die off rather rapidly. For example, about 30 per cent of the trees 10 years old died during the seven-year period. In order to get one tree to the sapling stage, it is probably necessary that thousands of saplings shall be started.

A party of Grand Canyon tourists, consisting of the publicity man of the Union Pacific R. R. and one of the officials of the system from Omaha, together with their wives and friends, was caught in a storm and broke down at Jacob Lake, where they had to remain six days. Ranger McCuistion acted as host to this party of four women and three men and upon their return they were lavish in their praises of him as cook, host, and general entertainer. McCuistion has been host to several parties of stranded tourists from all parts of the country, so that his reputation will soon be nation-wide and incidentally his abilities along this line have done much to advance the prestige of the Forest Service, since almost all of these tourists have never been on a National Forest before and their impressions of the whole Forest Service are received here.

--Kaibab News Letter.

District 5 - California District

The departure of Assistant District Forester Rachford to assume new duties as a member of the Branch of Grazing in Washington is greatly regretted, although we know that it means a larger field of action for him. Mr. Rachford, in his long connection with District 5, has made a deep impression on the force and is probably as well known to the public at large as any member of the Service here. He has not only handled his specialty with great ability but has deeply interested himself in all lines of work, and when Col. DuBois left it was but natural that he should be placed in charge of affairs as Acting District Forester. I am personally greatly in his debt for his unwavering support and fine assistance during the last year. We shall miss him tremendously and only hope that his visits here in the future will not be few or far between. I know that all members of District 5 will join me in wishing him all success. --P.G.R.

Forest Examiner Richard Colgan has resigned to take a very remunerative position with the Diamond Match Company in Washington. We understand that Mr. Colgan's new position will be sales inspection and that he will probably have charge of cruising operations. Mr. Colgan entered the Service on the Tahoe as Field Assistant in 1912. In the spring of 1918 he was detailed to the Forest Products Laboratory on war work, and with the close of the war he returned to District 5 and became a member of the Plumas organization. We realize that District 5 is losing a valuable man, but we are mighty glad he is getting such a fine position.

Ranger Frank A. Robinson, since 1908 a member of the Stanislaus force, has resigned. Mr. Robinson has several times had flattering offers of a position with a San Francisco firm, which he declined, preferring to remain with the Service at a lesser salary. This time, the inducements were such that, in justice to himself and his family, he could no longer refuse. Our best wishes for success go with Mr. Robinson to his new work. Ranger R. L. Kloppenburg of the Sierra will succeed Ranger Robinson in charge of the Tuolumne District of the Stanislaus.

Defaced National Forest Signs

The practice of defacing signs and buildings by writing names and scribbling poetry on them is a nuisance. Supervisor Smith of the Eldorado recently wrote to a number of people whose names were found on a Government sign and told them so. The following are extracts from some of the replies received:

"I assure you it was both in foolishness as well as in ignorance, and I appreciate your consideration in communicating with me before taking further action."

"If my name was found on any government sign, I wish to apologize for it would be through ignorance and not mischief. I am in my teens yet, but will never forget this letter."

"Did not know it was unlawful to write names on it; it will never happen again."

"I did not know it was wrong or against the law or I sure would not have did it."

"I shall be more careful in the future as to the defacing of property and still further assure you that your letter has had a very salutary effect upon not only myself but upon my family."

But this one takes the cake. The writer is surely a hero:

"The only explanation that I can make is that my wife might have written on the sign and I am sure if she was the one she will not allow it to happen again."

Secures Recreation Cooperation

Under date of November 8, District Forest Inspector Charlton says: "Recently I secured a promise from the Redlands Chamber of Commerce to develop a public camp site in Mill Creek Canyon at the lower end of the Bear Valley road where many people stop over night in order to make the early morning control. The Chamber has promised me $400 for this purpose. Including the value of the camp site donated by Wm. Kent on the Tahoe and the Camp Cajon development on the Angeles, we got over $55,000 cooperation during the past year for the development of our recreational resources. A total of 20 public camps were improved mainly through the use of cooperative funds. Keep up the good work!"

In connection with an examination of second growth stands on the Warner Mountain division of the Modoc National Forest this summer, Assistant Forest Entomologist J. M. Miller discovered a heavy epidemic infestation of mountain pine beetle in mixed yellow pine-white fir stands. On one area of approximately 160 acres, all of the yellow pine has been killed. Such infestations are very rare in District 5 and the future progress of this one will be watched with considerable interest. --T.D.W.

The marine borer survey of San Francisco harbor is in full swing. T. G. Townsend, engineer from the Forest Products Laboratory, is on the job, and the work is being supported by a large committee consisting of the chief engineers of five railroads, four oil companies, the United States Army and Navy, the U. S. Engineer Corps, and four shipbuilding companies. Mr. Hill has also been appointed an honorary member of the Committee and executive officer. The situation is serious, an average of about one big dock a week now caving into the Bay on account of marine borer destruction. With creosoted piling costing $1 a foot, it can be seen what renewals amount to, as for instance, that of the Southern Pacific Company at Port Costa, which will replace 14,000 piles running up to 100 feet in length.

Golden trout planted in two streams of the Monolake basin in October 1919 have thrived and attained the length of 6 to 7 inches in one year. Their color, says Ranger Green, is quite typical. The lakes and streams of the Rush Creek system have been celebrated for their abundance and size of trout. Fishing has been carried on here intensively during the past several years, but no perceptible decrease is noted. Two factors are no doubt responsible for the sustained yield, exceptional spawning places and abundance of food. There is a species of shrimp indigenous to these waters which is abundant and furnishes a good supply of food for the trout. These streams were barren prior to 1867 when a placer ditch from Virginia Creek brought them into the basin. The native cutthroat or Henshaw trout is the leading species. This is a very satisfactory species for this locality and holds its own well, is of excellent flavor, and is gamey on the hook. Where we find a species doing so well it is a mistake to introduce other species; each stream should be kept singly stocked so far as possible.

District 6 - North Pacific District

Good Luck to You, Cryder!

Supervisor William W. Cryder has resigned. To the old-timers in this District and to all who knew Cryder this is a matter of sincere regret. Before entering the Service as a ranger in 1905, Cryder served in the cavalry, in the U. S. A., in the Philippines, and elsewhere. He came in as a ranger at $900 in 1905 on the Rainier. He passed through the grades of deputy ranger and ranger, becoming supervisor of the Colville on October 1, 1907.

In 1908, he resigned and was out of the Service until the spring of 1910, when he came back as a ranger on the Deschutes. He served through the troublous days of the old Paulina Forest, when its headquarters were at Crescent, Oregon. He became supervisor again in 1911 and later took charge of the Umatilla, where he remained until last spring, when he went to the Malheur. For the short time he was in charge of the Malheur he made truly remarkable progress in bringing about an efficient administration. He resigned October 15, 1920.

Cryder was a man having a very high sense of duty, a conscientious forest officer, a man respected by brother forest officers and by the public. His many friends wish him success in whatever line of work he may enter.

The Wisdom of "Seward's Folly"

All of the Forest Service men in District 6 are probably familiar with the strenuous efforts being made by the Service to have the pulp and paper industry developed on the National Forests of Alaska. It has become necessary for the industry in the United States to migrate to new centers of raw material and southeastern Alaska, because of its immense forests of pulping species, good water powers and cheap water transportation, offers an excellent opportunity for the development of an important center for the manufacture of newsprint and like papers. The Forest Service is the agency to bring about this development which means so much to Alaska and to the United States in general, as practically all of the necessary raw material as well as the manufacturing sites are located on the National Forests.

As a result of the publicity given the paper and pulp possibilities, a large number of companies have manifested interest in the chances of developing plants in Alaska and quite a few of them have had pulp engineers go to Alaska and investigate. These engineers were almost without exception very favorably impressed and as a result a number of companies are preparing to develop such plants immediately and it is safe to predict that within ten years southeastern Alaska will occupy a prominent place in the paper manufacturing industry.

One company has already purchased one hundred million feet of timber and is now constructing a small pulp mill which it plans to expand within the next five years to a large balanced newsprint paper plant.

Within a few weeks 1,750,000,000 feet of spruce and hemlock timber will be advertised on the application of another company, which plans to install a 200-ton daily capacity newsprint plant. The plans are now being drawn for this plant and the paper machines have been ordered. In view of the fact that this company is converting a large gold ore milling plant into a paper manufacturing plant and that the necessary water power is developed and town, docks, machine shop, etc., constructed, it is believed that paper will be turned out by the spring of 1922 and pulp at an earlier date.

A third company has made application for sufficient timber and water power for a 100-ton daily capacity mill. As this company is in good financial condition and is headed by well-known business men, there is every reason to believe that its plans will be carried through to completion.

A large wholesale paper corporation which had an engineer in Alaska this summer has just informed the Service that it intends to submit its preliminary power applications as soon as possible with the idea of building a 100-ton plant for the production of the newsprint which it requires.

A publishing house in New York has formed a subsidiary company for the manufacture of newsprint and has filed its articles of incorporation in Alaska after investigations made for it by a firm of well-known pulp engineers. It is believed the company intends to install a plant of 75 tons daily capacity.

While some other companies have filed applications, it is believed that those indicated above represent the prospects that are likely to materialize into operating concerns in the near future. This paper and pulp development has placed an enormous and constantly increasing amount of work on the Forest Service organization in Alaska. It will require many years to cruise and map the pulpwood resources of the Forests. In addition the entire country must be explored for the best water power sites; and when discovered the power capacity of such sites must be closely determined, which not only requires topographic surveys of the entire watersheds but continuous flow measurements extending over a period of years.

The Wisdom of "Seward's Folly" (Cont.)

The work on the Tongass Forest has always been heavy, especially in timber sales and when the administration of a number of large pulp sales is added as well as the investigative work mentioned above, it can be readily seen why the Alaskan Forest officers are offering to exchange bed rolls for lanterns.

--Heintzleman.

Forest Insect Conference

A meeting of the Government workers on forest insect problems in the Rocky Mountain region and Pacific Coast regions was held at Coeur d'Alene October 25-30. At this meeting Canadian officials from Ottawa and British Columbia took part as well as representatives of the Bureau of Entomology and the Forest Service. Since the Oregon Agricultural College is much interested in the protection of Oregon's timber resources against insect depredation, it sent a representative to the meeting. The attendance included:

Dr. J. M. Swaine, in charge of forest insect studies in Canada.

Ralph Hopping, in charge of forest insect control operation on Government lands in British Columbia.

James Evenden, in charge of the Federal forest insect station at Coeur d'Alene.

J. E. Patterson, in charge of the Federal forest insect station at Ashland, Oregon.

Professor W. J. Chamberlin, of the Oregon Agricultural Experiment Station, who for the past few years has devoted all of his time to the study of methods of controlling insect losses in Oregon forests.

A. J. Jaenicke, insect control specialist, U. S. Forest Service.

A meeting of this kind is held annually in order to familiarize the specialists with each other's work and the problems which still demand attention. This was the fourth annual meeting, but is the first one in which the Canadian Government has taken part. The Dominion Government is spending thousands of dollars each year on the control of bark beetles which threaten the yellow pine stands of British Columbia; and since the same insects are causing losses in the yellow pine forests of Washington, Oregon, and California, the opportunity afforded at this meeting for the American specialists to meet the Canadian workers in the same field was of much value. In like manner the Canadians were much interested in the results of the efforts of the Forest Service and the private owners to keep insect depredations under control.

Methods of controlling the destructive bark beetles have been worked out, but there is still considerable room for improvement in the methods themselves and the application of them. --A.J.J.

District 7 - Eastern District

Commissioner of the General Land Office Tallman has approved for patent the application of W. W. Harrison to exchange under the Act of July 3, 1916, certain lands in the Florida Forest.

The conveyance to Mr. Harrison involves 3,514.58 acres. The land transferred to the Government embraces an area of 7,371.49 acres, the ratio being 2 to 1 in favor of the Government. The parcels which have been transferred by the Forest Service are outside of the so-called retention boundaries and of little value to the Forest Service because of their isolation. Those being acquired from Mr. Harrison aid materially in consolidating the forest lands.

This transfer has been in process of adjustment since July, 1918. In the meantime, the privilege has been given Mr. Harrison of turpentining the timber standing on the lands being transferred to him in order that he might realize the expected profits which led him to enter into the exchange. The Government interests were properly protected by a bond so that in case the transfer fell through for any reason, no loss would be sustained.

Six game cases were called at the recent term of the Federal Court held in Asheville, N. C. The defendants pleaded guilty to the charge of hunting. In five of the cases no game was killed. The fines in these cases were $10 and costs where two boys were involved, and $25 and costs where the defendants were grown men. In the sixth case the defendant pleaded guilty to hunting and to killing a deer. He was fined $50 and costs and given 30 days in jail to think it over. The effect of this sentence has been excellent and has already appreciably diminished the number of poachers.

District 7 - Eastern District (Continued)

Title Attorney M. B. Stickley has arrived in Asheville to finish the acquisition cases which must be condemned in order to clear title. These cases were held up in the District Attorney's office after the resignation of Special Assistant Cameron MacRae. There are still about 30,000 acres in the Pisgah, Mt. Mitchell, and Boone Purchase Areas to which the United States has no title other than the original purchase agreement.

At a meeting called by the State Forester of North Carolina recently, the question of erecting a lookout cabin on Silvermine Bald, which overlooks the lands of the Government, the holdings of the Suncrest Lumber Company, and the tract owned by the Gloucester Lumber Company, was taken up. All parties agreed to string their telephone lines to Silvermine Bald. It is probable that the cabin will be constructed at the expense of the two lumber companies, while the State and Federal governments will divide the expense of maintaining the watchman. It is too late to carry out the plan for the fall season, but the spring fire season may find the lookout on duty.

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

December 20, 1920.

New Alaska District

A new field district comprising the Chugach and Tongass National Forests in Alaska with headquarters at Juneau will take effect January 1, 1921. This District will be in charge of Charles H. Flory, who is at present Superintendent of National Forests in Alaska. The establishment of the new District was decided upon in order to facilitate the transaction of the growing business of the two Alaskan National Forests and is in line with the policy of decentralized administration.

The Tongass and Chugach National Forests comprise 20,574,000 acres of land and include practically all of the best timber along the coast of Alaska. The sales of timber are increasing steadily and receipts from the two Forests for the last fiscal year exceeded one hundred thousand dollars. With the development of a paper industry, which is now in sight, officials of the Forest Service expect that the receipts will be greatly augmented. A sale for 100 million feet of pulpwood has already been made to a company which will establish a paper plant, and a sale of one and a half billion feet is in prospect.

Interdepartmental Alaskan Board

The President on December 2 approved the creation of an Interdepartmental Committee the function of which will be "to coordinate and bring together facts and suggestions touching matters affecting Alaska, and to make recommendations for definite action to the Department charged with the particular function, to the end that duplication may be prevented and efficiency secured."

The personnel of this Board has been established as follows:

War Department	Major Clarence O. Sherrill, Corps of Engineers.
Post Office Department	James B. Corridon, Superintendent of Railway Adjustments.
Navy Department	Captain W. C. Cole, U. S. N.
Interior Department	Geo. A. Parks, Mineral Examiner and Chief of Field Division, General Land Office, Alaska, Chairman.
Department of Agriculture	E. A. Sherman, Associate Forester.
Department of Commerce	Dr. Hugh M. Smith, Commissioner of Fisheries.
Shipping Board	N. Y. Saint, Staff Assistant, Office of Director of Operations.
Federal Power Commission	O. C. Merrill, Executive Secretary, Federal Power Commission.
Governor of Alaska	Thomas Riggs, Jr., Member ex-officio.

The work of the Board is divided into four groups with a committee in charge of each.

Group 1, includes transportation, communication, and mails; War Department member Chairman, and one committee member from each of the following Departments: Post Office, Navy, and Shipping Board.

Group 2, Mineral, timber, and power resources, Agricultural Department member Chairman; other committee members from Navy and Interior Departments, Federal Power Commission.

Group 3, Fisheries, agriculture, and animal resources. Department of Commerce member Chairman; other committee members Interior Department and Department of Agriculture.

Group 4. Public welfare and education. Post office Department member Chairman; other members from Interior Department and Department of Commerce.

The Chairmen of the four groups compose the executive committee of the Board. Mr. Sherman, representing the Agricultural Department, has been selected as Chairman.

Pulp and Paper Notes

Canada exported 1,597,042 cords of pulpwood to the U. S. in 1919.

An average of 100 H. P. and one ton of coal are required for the production of one ton of paper.

The per capita consumption of paper in the U. S. was 125 lbs. in 1919.

Forty-two per cent of 105 paper and pulp companies of the U. S. and Canada reporting on the American Paper and Pulp Association request for woodland information employ trained foresters to handle their woods work.

A new type of paper machine has been developed which makes paper at the rate of 1,000 feet per minute. This is a world's record for speed and bids fair to revolutionize the paper industry.

Grazing Assistants Needed

The Civil Service Commission has been requested by the Forester to announce an examination for Grazing Assistants to be held approximately April 1, 1921. The Branch of Grazing is anxious to secure an additional number of Grazing Assistants. It is thought possible that some of our present rangers would be interested in fitting themselves by study for such work, and this early warning of the forthcoming examination may enable them to get in shape for passing the examination.

Results from Wireless Telephones

We have been getting acquainted with wireless in the last few years, and while some of us are still "doubting Tomases" it is clear that our engineers must study and experiment with wireless 'phones enough to enable the Service to take advantage of any new ideas which this mode of communication may have to offer.

The British Columbia Forest Service has been a leader in the practical use of wireless, and Mr. R. C. St. Clair, Assistant District Forester, Vancouver, B. C., has kindly consented to tell us what that Service has done toward the solution of their communication problem. Mr. St. Clair was formerly a member of our own Forest Service in District 1.--Roy Headley.

Wireless Telephones on Launches in British Columbia

One of the most difficult operation problems that the British Columbia Forest Service has to solve is that of communication. This has been particularly true of the Coastal Districts, for the many long narrow inlets and arms of the sea and the heavy stands of timber and thick undergrowth have made the cost of constructing and maintaining telephone lines very expensive. Our thoughts, therefore, have turned to wireless telephones as a possible method of solving the communication problem.

The Marconi Wireless Company of Canada have contracted for the installation of three land stations and five launch stations. The plan is to have a series of land wireless stations, at intervals of about 60 to 80 miles, along the Coast to act as "centrals" or clearing houses for the launches or smaller stations. Mechanical difficulties make this necessary. The launches furnished the Rangers are small; only relatively short aerials can be put on them, and there is no space for elaborate equipment. The radius of communication from the launches, therefore, is limited, 40 miles being the average maximum distance at which voice signals can be received.

The Land stations are equipped with the Marconi ½ K.W. cabinet transmitters, complete with seven step amplifiers for reception of speech. These sets are capable of sending and receiving messages both by telegraph and telephone. The aerials are about 350 feet long and the stations are tuned to work on a 1600 meter wave length. These stations have an average range of 250 miles over sea, but owing to the mountainous nature of the country prevailing on the B.C. coast the range is considerably reduced. Good telephone communication is being obtained at present at distances up to 100 miles.

The are equipped with 7 step amplifiers for telephone reception and $\frac{1}{4}$ K telegraph transmitters, by which means it is possible to acknowledge receipt of messages from shore stations. This installation is only temporary. Telephone transmitters of the type used on aeroplanes will be installed on the launches as soon as they can be obtained from the factory. The aerials vary from 20 to 40 feet in length, depending on the size of the boat, and the wave length approximates 300 meters. Full advantage can not be derived from the installation as a whole until the launches are equipped with both telephonic reception and transmission sets; at present, while the Ranger can receive his message by telephone, he can not send an answering message. As he is not a telegrapher, the most that can be expected from him is some simple signal signifying that he has received the message. At one of the land stations we are fortunate enough to have a telegrapher and in answering in to this station it is possible for the Ranger to spell out an answer slowly on the buzzer. When the operator of the land station is also an amateur, communication on the buzzer has so far proved impossible, although with more experience it may be that our men will pick up enough telegraphy to send and receive messages slowly.

Communication over the wireless telephone is very different from over the wire. It is much like dictating into a dictaphone. Receiving and transmitting can not both be accomplished at the same time. The instrument is first switched onto the transmitting side. You give a few "Hellos" (habit, I guess) count up to ten a few times to give the receiving operator a chance to tune in his receiving set to your voice, ask him if he is "getting you" and then turn off the transformer (motor) and switch in on the receiving side. This is repeated with variations until you are both tuned in, after which you deliver your message or receive his. The difficulty at first is that you seem to be talking into space. You have no feeling of actually having the other man "on the line." In conversation over the ordinary telephone there is a feeling of physical and personal contact with the other party, entirely lacking in wireless communication.

Wireless telephony is similar to wireless telegraphy. The receiving operator must have the receivers at his ears in order to know when his station is being called. We have found no workable method of "ringing him up" although we have made experiments along this line with an instrument called the Magnavox. It is necessary, therefore, to arrange a time schedule between the different stations.

Since July 1st, when the installation was completed far enough for us to commence to get some real service from the wireless telephones, there have been some 500 messages sent and received and relayed at the three land stations. A fair proportion of these messages were forwarded on to the launches. In this way we have been able to keep in much closer touch with the field staff during the height of our fire season. The District Forester was in the field for two weeks during August on the Headquarters Launch. He was able to keep in close touch with the fire situation in all parts of his District. Reports of the situation were sent him each day and were received on the launch at distances ranging up to 40 miles from the nearest land station. For rush jobs and conveying instructions the wireless telephone has worked out satisfactorily in several cases. For example: instructions were sent from Vancouver to a Supervisor asking for a check cruise on a certain small timber sale area. This message was received 35 miles from his nearest land station by the Supervisor on his launch within 30 minutes. The job was done the same day and a wireless report received from him the next morning.

From the Supervisors standpoint the wireless on the launches is invaluable. He is able to locate his rangers and keep in touch with them. Heretofore they have often been out of touch with the Supervisor and with the District office for a week or more at a time, due to poor telegraphic and mail service.

While the Department officials are more or less optimistic regarding the use of the wireless telephone in Forestry work in B. C., the matter is still held to be in an experimental stage. Numerous details remain to be worked out and further tests, especially with small transmitting sets, must be made before we are entirely satisfied. Local and static interference has bothered in some places, particularly in the city of Vancouver. It is hoped and anticipated that these minor difficulties will be gradually overcome. The whole science of wireless telephony is in its infancy and both the Department and the Marconi Company realize that their tests are not final. Their mutual hope is that from the tests and experiments made under actual working conditions there will be developed a practical method of communication which will aid in forest administrative and protective work.--R. C. St. Clair.

Efficiency

I have been much cheered, and my courage has been renewed, from reading the article by "EFFICIENCY BILL" that appeared in the Washington "Weekly Bulletin" of October 18th. It fills the heart of a despondent Ranger with great joy to know that we have among our number such able men as Bill.

I deduce from Bill's own statement that his six mills cut, collectively, 20 or 30 M. per week, or about 5 M. per mill on the average. Some of the "hay wire outfits" need scaling every three weeks; Bill says so. Bill has 750 head of cattle on his district; think of it, 750 HEAD. Many a strong man would break down under the weight of the grazing work alone. And 12 special uses, TWELVE, count 'em! The work of looking after so many uses is a severe drain on time and strength, as we all know. And 75,000 acres in his district, about one-third the acreage of the average district. And 50 miles of roads and trails. County roads? I guess yes! Trails, standard or cow? Bill does not state. And 30 miles of telephone line. Think of the number of poles in 30 miles of line, 900 about, and Bill climbs them all, one-at-a-time; if he climbed two at a time he would break his schedule. Bill says his wife plans most of the work. I hope he splits the check with her; he should anyway. Bill claims that the men from Washington visit with him, and so cut into his working time quite a lot. He should overlook this trouble; they are probably learning from him. And yet Bill finds time to do a little fishing? Yes, indeed! If I had that district, I could fish half the time at least. And Bill has the approval of his Supervisor. It is a sweet thought. I am afraid my Supervisor seldom approves of me.

Any old timer who knows the ropes, can analyze Bill's article and see the point, in fact two points. The trail has at last been blazed, the method to be followed is no longer in doubt, all is not yet lost, for we still have Bills. The "Weekly Bulletin," speaks with the voice of authority" and I hold in high esteem the good men that edit this paper. Is this favorable regard increasing? Yes, I don't think! Field men expect this sheet to be maintained at a high standard. Is it going to break down? Let us hope not. But why print the vaporings of "Efficiency Bill?"--Loring. Durango - San Juan.

(Note: "Efficiency Bill" states that the area of his district is 175,000 acres, not 75,000 acres - also that the fishing was excellent this summer.)
--Editor.

D-2 "Comes Back" at D-3

In the October 4 "Weekly Bulletin," there appeared an article entitled "Some Comparisons of Districts 2 and 3," containing extracts from a memorandum by Aldo Leopold, Assistant District Forester. District Forester A. S. Peck's reply to these statements, copied from a letter to the District Forester at Albuquerque, New Mexico, follows:

"Every time I look over Leopold's memorandum of August 29, covering his visit to this District, I am more and more saddened at the realization that Mr. Headley's object in sending him up here to see how a District can run on no money at all was not attained. I thought, of course, that Leopold would go back to Albuquerque and immediately arrange with you to give us a part of the money on which D-3 is living so luxuriously while we struggle along in abject poverty. Lest further evil should result through certain matters going into the record undisputed, I am offering the following comments:

Fire: "The more I study the question of protection guards, the more I wonder what D-3 finds for all the 126 to do. Glance at the following:

D-2 "Comes Back" at D-3 (Cont.)

Fiscal Year 1921

	D-2	D-3
Gross area (acres)		
Arizona and New Mexico		20,999,024
Colorado, Wyoming & South Dakota	20,610,918	
Rangers, exclusive of timber sale and special men	149	123
Protection guards	45	126
Total protection force	194	249
Area protected per man (acres)	106,241	84,293
D-2 protects more per man than D-3 - acres	21,948	
per cent	26	
On basis of protecting equal areas D-3 force exceeds D-2	26.4%	
Total timber stand	34,219,865 M.	28,597,658 M.
M. ft. timber protected per man	176,000 M.	115,000 M.
D-2 protects more per man than D-3	61,000 M.	
	53%	

"In working up the above, we used the gross area because, so far as protection is concerned, it is usually necessary to protect interior private holdings the same as our own. We included only Colorado, Wyoming and South Dakota because the conditions in the Lake States and Nebraska are so materially different from those in D-3 that no sort of comparison would be possible. Seventeen of our protection guards are employed in the Lake States. I got at the number of rangers in D-3 from a recent item in the Washington Weekly Bulletin in which you give a comparative statement of the force in 1915 and 1921. We deducted all of the 27 men employed for timber sales or Forest Management from the 150 men employed on ranger work, though I presume this is too great an allowance, since probably some of the 27 are lumbermen and scalers. The figures on timber stand for District 3 I took from the table gotten out by the Forester in 1917. This would indicate that the smaller size of our ranger districts and correspondingly greater number of rangers is not part of the answer as to the difference between the number of protection guards employed.

"As to the comparative burnable areas, I hardly believe that Leopold saw enough of the District to gain a very good idea of this factor, because the Cochetopa Forest is much less heavily timbered than most of our other lodgepole Forests, particularly in Wyoming, and we consider it way down the list as far as fire danger is concerned.

"The question of normal fire hazard between the two Districts is one which is pretty hard to arrive at anything definite on, and I am not prepared to argue this point. However, in view of the pretty general absence of reproduction in your Arizona yellow pine where you have that heavy bunch grass, is it not probable that the damage there from fires, which do not ordinarily consume the big trees, would be considerably less than in the denser lodgepole stands, particularly in Wyoming?

"I may be unduly optimistic but I am unable to produce a shudder over the possibility of tremendously serious fires every generation or so. The big fire scars in this District resulted from fires which had occurred long before the Forest Service took charge of the National Forests, and it is a matter of local history, supported by the testimony of some of the old timers, that fires in those days were allowed to burn for weeks, or even months, at a time without any attempt on the part of even the nearby ranchers to put them out. Surely those conditions can never return and I really am unable to see that there is being built up any heavy accumulation of forest litter which will make fires twenty years from now appreciably harder to control than at present. Therefore, unless our protection scheme should be absolutely abandoned I am unable to visualize a future full of flying cinders.

"I maintain that District 2 has conscientiously attacked the problem of how to expand its organization a hundredfold in a crisis. For years one of the chief features of our fire plan has been the provision made for the advance enlistment of cooperation on the part of both the nearby ranchers and sources of labor in the communities which would be called upon in case of big fires. Our scheme provides for the local officers determining and charting all sources of labor and supplies and arranging in advance with ranchers and others for prompt action in case of a fire. This has worked out so well that at the time of the Bighorn fires, ranchers came unsolicited from all the surrounding country so that, in the case of a recent fire on that Forest, we had 135 men on the job in a remarkably short time, which was probably twice as many as we actually needed to put the fire out, and the bulk of them came without being called. I believe that we are prepared to step out on a moment's notice and expand our organization a hundredfold on any Forest, in most cases without having to call on what is commonly called the "third line of defense," namely, the more or less floating labor.

"We have never yet had, nor do I foresee having, an emergency which would require the district ranger to stay at his headquarters and direct operations. Ordinarily, his place is supposed to be on the fire in charge of the organization. Regardless of this point, however, Leopold's outline of an emergency fire organization seems to me excellent when applied to an unusually serious situation.

Forest Ratings: "I am exceedingly interested in Leopold's scheme of working out some qualitative measure of administration on the Forests and it is something which we need very much. I hope that he will keep us advised of developments along this line.

"I heartily agree with you that inter-District visits of this character are exceedingly valuable and I hope very much that there will be a lot of this sort of thing between Districts 3 and 2. My only regret, as I say, is that our poverty was not more apparent to Leopold."

New Legislation in Congress

Safety First: "Washington has been observing a safety-first week. So has Congress. The municipal authorities believe that there has been too much joyriding and recklessness. So does Congress. Consequently, although never before was there such a swarm of propagandists and advocates for quick relief legislation, the leaders of Congressional activities are disposed to hang back."

Watershed Protection: Representative Sims (D) on December 9 introduced a bill under the provisions of which an appropriation of $10,000,000 is asked for protection of watersheds on navigable streams.

Wool and Sheep Embargo: An embargo on wool and sheep importation was urged December 9 before the House Ways and Means and Senate Agriculture Committees by representatives of wool growers. It was stated that such legislation was necessary to save a great industry threatened by the collapse of the wool and sheep market. There is now in storage in the United States 996,000,000 pounds of wool, enough for two years' supply.

Mining Claims: Two joint resolutions have been introduced in the House of Representatives "to suspend the requirements of annual assessment work on mining claims during the year 1920."

National Forest: On December 9 a proclamation was signed by the President adding 40,071.94 acres to the Caribou National Forest, Idaho. The land lies northeast of Montpelier, Idaho, adjacent to the Wyoming boundary and composes what is locally known as the Red Mountain country. The lands are entirely unsuited to agriculture, but have considerable value for forestry, especially in connection with the protection of the headwaters of important irrigation streams.

Like to Go a-Fishin'

Like to go a-fishin' when the skies above are blue
An' the summer sun is shinin' in the way you want it to;
Like to go a-fishin' when Miss June is smilin' gay,
But Lordy! how I'd like to go now ice is on the bay.

Like to go a-fishin' most any time at all,
Like it in the springtime an' I like it in the fall;
But now the winds are dreary an' the ice is in the bay,
I wish that it were summer so that I could go to-day.

Oh, winter's long an' cheerless and its skies are seldom blue,
It never lets you do the things you really want to do;
Your tackle's in the attic an' your creel is put away.
An' dreams are all that's left you when the ice is on the bay.

--Edgar A. Guest.

"Front! -- Ice water for 23"

A letter received from Mr. Potter conveys the information that he has entered a new sphere of activity, namely hotel-keeping. Recently, in partnership with an old-time friend, he purchased the Bellevue Hotel in San Francisco, and says that all his associates in the Service will be especially welcome. Mr. Potter does not intend to devote his whole time to this business, as he will still make his home in Los Angeles, running up to San Francisco occasionally to look after the finances of the enterprise.

This isn't Potter's first flier in hotels, for he is one of several men who built and now operate the Muhlbach Hotel in Kansas City, probably the finest and most up-to-date hotel in the middle west.

Meantime, just to keep himself busy, he has gone off down into Old Mexico to report upon the grazing possibilities of the old Terrassas Cattle Ranch in Chihuahua, at one time the largest cattle ranch in the world. The property consists of over six million acres of land, which besides grazing values has all sorts of oil, mineral, and agricultural possibilities.

Don Pancho Villa has been utilizing the property for the last eight years as a headquarters for his warlike activities, and the owner, Don Luis Terrassas, has been across the line in the United States watching his cattle herds fading away under the demands of the hungry revolutionists, while his land was also parcelled out among the peons. Villa has retired from the revolutionary game, and Terrassas is too old to again attempt to handle the property. His only son died two or three years ago from the effects of Villa's outrageous treatment of him as a captive and hostage. Several Americans, realizing the value of the ranch, have undertaken to purchase it from Terrassas. Potter will expert its grazing values for them. He gets a rattling good sum for his services, but before starting was obliged to sign an agreement releasing the company from all responsibility for injury or death at the hands of the revolutionists.

It's hard for an old-timer cowpuncher to keep away from the range.

--W. C. Barnes.

THIS IS YOUR BULLETIN

WHAT HAVE YOU EVER DONE TO MAKE IT A SUCCESS?

"Let us have faith that right makes might, and in that faith let us dare to do our duty as we understand it." --Abraham Lincoln.

"There is no market for wild oats."

Thinning the Nebraska Forest: A thinning experiment is being initiated on the Nebraska Forest in a plot of one-quarter acre which is typical of about 150 acres of the plantations. This represents a part of the early planting and replanting, much of which was done during 1910 and 1911, at a period when the policy of planting trees very densely was inaugurated to offset the heavy losses that had been sustained.

A recent count of a jack pine plantation established in 1911 showed an average of 3,012 trees per acre; the planting of that year having had a survival of 85 per cent. The trees now average about ten feet in height and are so dense it is almost impossible to ride through the plantation. Since that year, the trees have not been planted so densely and thinning will not be necessary until larger size material can be removed.

It is proposed to sell the trees removed in the thinning for Christmas use. Jack pine is not especially desirable for this purpose where other species are available; but there will undoubtedly be a limited market in the sandhills for Christmas trees, since no trees are shipped into this region. If a market is found for these trees, as is anticipated, it will be the first commercial sale from the Nebraska plantations.

Experimentally, the thinned plots will be of great value in determining the increased growth following thinning, and also to secure stand figures to determine the number of trees per acre that certain sites are capable of supporting.

Violation of Migratory Bird Law: In November 1919, the Supervisor of the Cochetopa advised the District Forester of the killing of a number of swans on the preserve of the Saguache Fish and Gun Club. A report was made under the provision of the migratory bird law. Since the Bureau of Biological Survey wished that the matter be prosecuted, affidavits were secured and the violation was heard before the Federal Grand Jury in November 1920.

The circumstances were as follows: In November 1919, fourteen of these swans appeared on certain lakes south of Saguache, within the preserve of the Saguache Fish and Gun Club, and the members of the club were very anxious to get some of them since they are seldom seen in that locality. Before doing so, the State game laws were looked into, which showed an open season on swans. They failed, however, to look up the migratory bird law. Five of the swans were killed; most of them by high powered rifles as ordinary shot did not appear to be able to penetrate the feathers. The parties who killed the swans were not at all hesitant about admitting it and did not think they had violated any law. The case was prepared against only one of the violators, and in the hearing the general view was that there were extenuating circumstances and the matter was disposed of on suggestion of the Grand Jury that Mr. Bock, Assistant District Attorney, address a letter to the violator calling his attention to the infraction of the law and advising him to be very careful about future hunting. The Grand Jury felt publicity would thus be given the matter which would have the desired effect and the case was not carried any farther.

Cooperative Insect Control: Steps have been taken to cooperate with the State of Colorado in the cutting of insect infested timber located adjacent to Hot Sulphur Springs near the Arapaho National Forest. Supervisor Richey plans on assisting by marking the trees for cutting and supervising brush disposal on an area of 120 acres of State land. All of this area is not timbered. This cooperation is of particular importance from the standpoint of the Forest Service, since handling the cutting in the manner planned should result in efficient control of the insect infestation.

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New officer: "Well, I'm off. Got an expense account to make out that will take me till late."
Old timer: "Why don't you tell the truth and get a good night's rest?"

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Supervisor on timber sale: "I would like to see some marking that the Inspector has approved."
Ranger: "So would I."

District 3 - Southwestern District

Nothing New Under the Sun: While the "V-bed" method of felling, mentioned in the Weekly Bulletin of November 8, may have been developed at the plant of the Edward Hines Yellow Pine Trustees at Lumberton, Mississippi, it originated in the brain of a Swede sawyer many years ago. We can submit no reliable figures as to the date of its birth but we do know that the system has been in more or less common use on the Coconino Plateau for at least eight or ten years and has gradually spread to other Forests in the District. In fact we have grown so used to this system that, isolated as we are from other lumbering regions, we thought the system was in more or less general use throughout the country.

The system does prevent "kick back," "splinter draw," and to a certain extent "breakage." It does not, however, in our opinion materially alter the amount cut in a day by a saw crew. No system is fool proof, however, and we know of one man being killed by a falling tree while using this method.

Smokers--Attention! The item of "Who Smokes Cigarettes" in the November 8 issue of the Washington Bulletin struck a responsive chord with the associate editor of this bulletin and gives expression to a line of thought which has often come his way especially during the fire season. The question propounded is "Should a Forest Officer Smoke?" Since his profession of life occupation is a continuous battle against fire, why should the curling smoke from cigar or pipe have such a soothing effect or offer such pleasant companionship on lonesome field trips? The employees in a powder factory do not smoke, and yet the fire warnings around the plant are no more emphatic than those seen in the Forest. And are we 100 per cent back of our fire warnings, or only 99-5/9 per cent, like a certain brand of soap? But we can overcome the missing 4/9 per cent.

There's argument without end on both sides, but needless to say, the other fellow's fire isn't always kept in its place. However, this may be passed up without thought, since the A. E. was a teetotaler from choice long before he even fought a forest fire.--Coconino News Bulletin.

Wood Signs: As opposed to the position taken by D-5 in regard to metal signs, this District considers it economy to stay with the wood standard for road and trail signs. Considering the life of the two kinds of signs the wooden ones will cost about one-half as much. We consider also that wooden signs are superior in appearance.

Sunday Dinner? Like chicken-and-dumplings? Try this on your kitchen piano: FIRST CATCH YOUR PORCUPINE. The bigger, and older, and tougher he is the better. Don't shoot him all up; either shoot him neatly through the head or, if he is on the ground, wallop him just above the eyes with a club. Turn him on his back and open the hide from chin to tail and split out to all feet. Peel hide back and cut off and save legs only and take out the liver. Leave body for brother Coyote. Place in pot with unsalted water and half teaspoon baking soda and boil 20-30 minutes. Change to fresh water and boil until completely tender--about five hours. Add salt and black pepper to taste. Make a biscuit dough and roll very thin, cut in strips for dumplings and drop into briskly boiling pot. Boil 30 minutes. Oh! Man! --Carson Pine Cone.

Mountain Lions: Ranger Oldham reports that the Predatory Animal Inspector has assigned Ramsey Patterson with three assistants and 26 dogs to the Camp Wood country to clean out the lion. A fine specimen was bagged by Mr. Patterson the second day.--Prescott News Letter.

Razorbacks Devastate Forests: The sheep is not the only four-footed animal being accused of having an undue appetite for pine seedlings. A different species of pine, in another clime, however, is the subject of concern. The long, thick, succulent tap root of the longleaf pine seedling appears to be a dainty morsel in the eyes of the famous razorback hog. Their depredations have been so severe, especially in hardwood swamps and near settlements in the South as to effectively prevent the establishment of longleaf pine reproduction.

The shortleaf pine which is often found in mixture with the longleaf pine and the loblolly pine appears to be immune from the attacks of the razorback.--RS.

Road Work: A recent compilation by the office of Engineering of the road and trail needs for the Southwestern District shows 1132 miles of road construction estimated to cost $7,084,000 and 708 miles of trails estimated to cost $85,000 needed in the National Forests of Arizona. The New Mexico Forests need 1142 miles of road construction estimated to cost $5,467,500 and 1029 miles of trails estimated to cost $283,500.

A Wandering Jew: In May a copy of the "Forest Pioneer" was mailed to an ex-officer in China. It limped back to the office to-day a much travel-stained but still dignified "Pioneer," the envelope bearing many strange hieroglyphics, numerous combinations of figures, a long slip much resembling the kind attached to one's laundry by friend Wung Ling down the street, 16 postage due stamps, and 18 post office cancellation dies. One of our "Prevent Forest Fires" stickers on the back of the envelope evidently aroused the suspicions of the Chinese post office department since it received especially numerous and unkindly jabs at the hands of the cancellation die wielders.

Trespass Cases: Ben F. Marshall and J. K. Hinman have pleaded guilty in the Federal Court of Prescott to occupancy trespass on the Coconino. Each was fined $25.

Pencil Woods: Mr. A. L. Holt, of the Hudson Lumber Company, California, was a recent caller in the interests of investigating juniper stands in this region to determine the feasibility of establishing a pencil wood mill here. He states that Alligator, One Seed, and Utah Juniper are all suitable for pencil manufacture so long as straight grained material can be had.--Coconino News Bulletin.

New Use for Fords: Guy wires for fire towers, telephone poles, wireless aerial poles, etc., can be made from our ordinary No. 9 and 12 telephone wire in a few minutes by the aid of Mr. Henry Ford's jitney.. Jack up one rear wheel, block the others, fasten two, three or four strands, depending on the strength of the guy wire desired, to the spokes of the wheel. Other end of wires fasten to a solid attachment about two feet above the ground and at the required length of guy wire desired. Then spin Lizzy. Result in a couple of minutes--a manufactured guy wire.

Prohibition and Forest Fires: "Smoking out moonshiners" may be a new caption under causes of forest fires, at least on the Coronado. Recently a fire that burned across the international line into the Huachucas was put out by several cattlemen on this side and in following the fire to its source on Mexican soil found a "still" and all the makings. The outfit had just been taken by Mexican officers who stated that they had started the fire to destroy the nearby grass that was essential for forage for the string of horses used by the moonshiners in their business of whiskey running across the line into the United States.

First Pensioner: Ex-forest Ranger William H. Pierce, of the Coconino, recently retired after many years service, is the first individual in the district to come under the provisions of the civil service pension law of May 22, 1920. The Bureau of Pensions has granted him an annuity of $286.20 a year.

District 4 - Intermountain District

Mistaken for Col. Graves: Ranger Jensen had a pleasant surprise last summer when some chummy lady campers drove up to the station, introduced themselves and asked if he were Mr. Graves. He had to confess that he was not, but assured them they were just as welcome to enjoy his particular part of the National Forest.
--Minidoka Hustler.

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For our part, whenever we see a woman with $1,000 worth of fur on we wonder who her husband skinned.--Dallas News.

Impure Water Supply: Mr. Wilson, an engineer of Idaho Falls, called at the office on November 24, on an investigation on behalf of the State, of the typhoid situation in Montpelier. Several cases of the fever have developed recently here. No fatalities have been reported so far and all patients are recovering. The water supply of Montpelier has been condemned by the State and by the Oregon Short Line Railroad for several years, and although the city of Montpelier has a chlorinating plant for purifying the water, this seems to have been inoperative for some time back, but is now in running order again. Mr. Wilson inquired particularly as to possibility of pollution of the water by settlers above the city reservoir, or from the road camp on the creek during the past summer, also as to the extent of grazing on the watershed. He did not seem to stress this latter as a possible cause of the impure water supply, and we do not believe that the State or city will request the Forest Service to reduce or discontinue grazing on the watershed.--Caribou News Letter.

Protest Game Preserves: Information has been received that the members of the Paragonah Livestock Association have filed protest with the State Fish & Game Commission against the setting aside of the Parowan-Paragonah Game preserve. Fear is expressed by this Association that deer and elk will become so numerous that they will consume all the forage upon this reserve and it will therefore be necessary to exclude their domestic stock. It is expected that this matter will be taken up with the Game Commissioner and also the members of this Association in an attempt to reconcile this Association to the establishing of this game preserve.--Dixie Doings.

Simpson Back from Idaho: Mr. Simpson just returned from a visit to nearly all of the Idaho headquarters and states that while comparatively few men took the Ranger examination, the indications are that it will be much easier for us to get desirable men next season. He says that a good many mills and mines in different parts of the country are closing down or reducing their forces either on account of the climatic conditions or financial conditions and there are already quite a good many unemployed men in different parts. While he was at Challis, Supervisor Laing put on his usual game violation prosecutions. Last September when Mr. Simpson was there, Supervisor Laing had a case for illegal killing of deer and when he arrived in Challis this trip, Laing and several of his assistants were running down a person who had killed two mountain sheep. They secured enough circumstantial evidence to scare the man into confessing that he was guilty and he was fined $100 and the game was sold for $24. This was a good example of what can be done by following up clues such as horse tracks, spots of blood and detection of a few hairs on the guilty man's clothing. Supervisor Evans of the Lemhi had also just successfully handled a game violation case and secured a fine of $100 and costs for killing a deer on the Copper Basin game preserve.

McLaren Visits Cache: John McLaren, in charge of Fire Protection in District 2, with headquarters at Denver, was an office visitor December 1 and 2, during which time a great deal of useful and interesting information was given by him to members of this office. He left Thursday evening for Ogden to confer with District Officials and Mr. Headley of the Operation branch of the Washington office. Here's hoping that Mr. McLaren will put into written form the many things touched upon by him during his visit in relation to Fire Protection, and that at an early date we may make that information available to all Cache officers in written form, as interesting as the oral presentation proved to be.--Cache Register.

Organize Fish & Game Association: Through the efforts of the Commercial Boosters Club of Logan, who have previously done considerable along the line of fish and game work, a Fish and Game Committee was appointed to consider the forming of a Fish & Game Protective Association. Mr. Locke, of this office, Mr. Hestmark, President of the Weber Rod & Gun Club, and Mr. Siddoway, State Game Warden, were present at the meeting. They expect to hold another meeting in about a week for the election of officers and completing the organization.

Enjoy Road Work Benefits: Residents of Grand and San Juan counties are beginning to enjoy the benefits of the extensive road building operations that have been going on in this section for the past year. Due to the tearing up of the

District 4 - Intermountain District (Cont.)

roadbed and the dryness, travel throughout the summer was under more trying conditions than for several years. The fall storms, however, served to pack the new roadbed and with the shaling and surfacing operations nearing completion, the trip from Moab to the railroad is now only a two-hour ride, where formerly it took twice as long. Most of the construction outfits are moving away and only a few workers on bridges and culverts are left.

The expenditure of $10,000 by the county on the road up Grand River from Moab to Castleton was commenced early in November, with the object of making that route passable for autos and changing some of the location to points above high water levels, so that year round use will be possible. When this work is done the ride up the canyon will be an interesting one. The side walls are nearly perpendicular all the way and reach a height of from 1,500 to 2,000 feet, displaying many strange and pleasing formations.--La Sal News Letter.

District 5 - California District

Gift Presented to Colonel Graves: The following letter was written to Colonel Graves by District Forester Redington in connection with the presentation of the remembrance from the Forest Service and the Forest Products Laboratory:

"I consider it a very great privilege in being delegated by the District Foresters and the Director of the Forest Products Laboratory, to present to you, in the shape of a cigar humidor (made at Madison), a reminder of our esteem and affection.

The years from 1910 to 1920 were for the Forest Service filled with problems that taxed your resource, ingenuity and physical energy. To the solution of the problems you gave all that was in you and to splendid effect.

That you possessed in high degree the qualities of a leader is most patent to those who know the progress of the Forest Service and National Forestry during your term as Chief Forester. The men and women who worked under your direction appreciate to the full the benefits of their association with you, your thought for their welfare, the confidence which you reposed in them and the regret when you left the Service was universal and sincere.

We all join in hoping that the gift which is going to you will give you pleasure and that its sight on your table will remind you that it is, though meager, a tangible evidence of our regard and our wish that the future for you and yours will be full of the bright things of life."

Summer Homes on the Eldorado: On June 30 the Eldorado had 94 summer home permits in effect. On December 1 there were 160 in effect, an increase of 64 in 5 months. With the Angeles safely in first place, the Eldorado promises to keep the other Forests busy if it is kept out of second place in recreational permits.

"Efficiency Bill" Please Note: Ranger Hagerman of the Rio Grande has nothing on Ranger Davis of the Devil's Garden District on the Modoc Forest, as shown by the following record for the Fiscal Year 1920:

"11,641 cattle and horses and 6,934 sheep permitted; 55 small timber sales; 88 special use permits; 6 claims cases; 3 trespass cases and 12 miles of standard telephone line built.

Receipts

Grazing, C. & H.	$8128.41
" S. & G.	522.72
Timber Sales	634.40
Special Uses	622.21
Trespass	49.10
Total	$9956.84

Expenses

District Ranger's Salary	1390.00
Guard, 2½ months	250000
Travel Expenses	123.79
Forage	250.15
Total	$2013.94

The district contains slightly over half a million acres, about 25 per cent pine timber, the balance juniper woodland. It contains one of the largest bodies of juniper (Juniperus occidentalis) in the West, a herd of antelope, a colony of beaver and practically all of the private timberland on the District is covered by fire cooperation agreement."

We might add that Davis was off his District about one-half the time working with the Air Patrol.

Recreation Travel to Forests: There is frequently considerable argument relative to the travel to the National Parks as compared to travel to the National Forests.

This past season 68,906 people visited Yosemite Park; 46,074 of these visitors camp in 13,418 automobiles. During the same period 250,000 people by actual count traveled over the Rim of the World drive on the Angeles Forest. With these and other known figures as a guide we are safe in estimating that considerably over a million people visited the Forests of California last season. This is ten times the number that visited all the National Parks in California. Is it any wonder that the Forests need more public camps and other recreational development?

Preparedness is not necessarily synonymous with safety. Witness one Pat Murphy who, when asked what was bulging in his vest pocket, replied:

"Dynamite. I'm waitin' f'r Casey. Every toime he meets me he slaps me on the chist an' breaks me pipe. Next toime he does it he'll blow his hand off."--Journal of Electricity.

Movies of Teredo Work: Mr. O. H. Stolberg of the International News Film Service is busily engaged to-day filming some of the structures along Carquinez Straits, which have been destroyed and thrown down by teredo. He then expects to take some pictures of the borers themselves and movies of the members of the San Francisco Forest officers and Bay Marine Piling Committee, engaged in their work of studying piling. This will be a good piece of publicity for the Forest Service, which is cooperating with the Committee and supervising the studies, and should help in bringing the marine borer problem to the attention of the public all over the United States. It was stated by Mr. Stolberg that the pictures will be shown in thirty thousand theaters throughout the United States.

Exhibit Results during the first week at the S. F. Public Library.

1. Attendance: 2000 pupils and 100 teachers in 10 bunches of 40 pupils and 2 teachers per day.
2. 10 talks each day, each lasting 25 minutes.
3. 60% of the pupils bring notebooks and take notes.
4. Every pupil writes a composition based on what was seen and heard at the exhibit.
5. Each class has oral discussion in addition to the composition work.
6. Visual Instruction.Supervisors and teachers are delighted, and we have been asked, informally, to extend the exhibit to a third week.
7. San Francisco classes not scheduled are coming after school hours.
8. A San Mateo teacher is bringing her class to the Exhibit at 6 o'clock some evening, so they can see it.
9. Boys and girls of one class are now constructing 2 models, showing the right and wrong way to graze sheep, so the rest of the school can know how to use and conserve feed, which is one of the natural resources on the National Forests.

New Deputy Supervisor: Announcement is made that B. I. Shannon of the Washington Office of Operation has been transferred to the Klamath as Deputy Forest Supervisor. We are mighty glad to welcome him into the District. He is particularly well qualified for service on the Klamath because of his familiarity with local conditions through his vast experience on the Siskiyou in District 6. It is expected that Mr. Shannon will report for duty at Yreka next week, as he is now on his way here from Washington.

Cedar is used for cigar boxes because the aroma of the wood is supposed to add to the bouquet of a cigar. The trade custom requires that cigar boxes at least appear to be made of cedar.

District 7 - Eastern District

Improved Logging Chutes: The successful handling of low price forest product of small dimensions, such as acidwood and pulpwood, in the rough mountainous sections, requires a cheap method of delivery to the established transportation system.

For this purpose dry or wet chutes are built out of lumber or poles. Due to the rough country through which such chutes must be built, heavy grades and sharp curves are often necessary. In the past considerable difficulty existed in keeping the material being transported from jumping from the chutes on the sharper curves. Where water was available some of this difficulty was eliminated by keeping the bottom of the chute thoroughly wet.

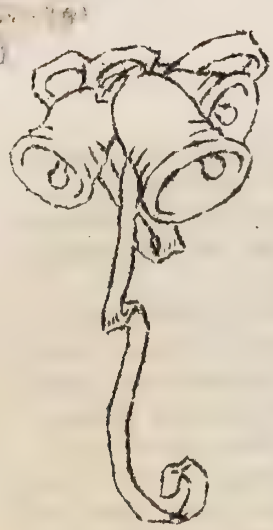
An ex-railroad foreman who was working for an acidwood contractor requested that he be allowed to construct the next chute, since he desired to apply certain principles of railroad construction. He was granted a free hand and constructed a chute that worked. Upon a close examination it was found that on all curves the outside of the chute had been elevated as in wagon road and railroad construction. Without having the curves elevated the wood crowded the outside of the chute and would finally jump out on a tangent. However, with this construction the wood hugged the inside of the curves and never jumped clear of the chute. A considerable saving has resulted in operation, since there is no wood to be replaced in the chute. Even in this era of specialization there is always room for improving established methods.--Pisgah.

New Purchase Areas: At the meeting of the National Forest Reservation Commission, held on November 29, 11,098 acres of land were approved for purchase made up of 1,458 acres on the White Mountain area at $7.50 per acre, 192 acres at $2.50 on the Shenandoah, 97 acres at $4.25 on the Massanutten, 2,948 acres at $4.00 per acre on the Unaka, 1,345 acres at $7.50 on the Boone, 608 acres at $5.19 on the Alabama and 4,450 acres at $3.82 on the Arkansas. There was also approved for purchase 7,030 M feet of spruce fir and hemlock on the Publishers Paper Company tract 57n in the White Mountain area, which has a value of $3.00 per M. This tract of the Publishers Paper Company was previously approved for purchase with the timber reserved. It contains by survey 14,247 acres making the average price for the timber now being acquired, $1.48 per acre, the total value is $21,090. The expenditure under these approvals amounts to $77,066.88.

The Commission authorized location of a purchase area to be designated as the Allegheny on the headwaters of Allegheny River in New York and Pennsylvania whenever these States shall pass suitable enabling Acts.

The Commission also authorized Secretary of War Baker, the President of the Commission, to submit to Congress an estimate for an appropriation of $10,000,000 for the fiscal year 1922.

Natural Bridge Reconnaissance: During the past summer and fall examination and appraisal of lands for purchase has progressed rapidly on the Natural Bridge Area. In spite of the reduced force available for this work, a total of approximately 20,000 acres has been examined, most of which lies in the northern end of the Area in Augusta county. This block of land comprises some of the roughest as well as some of the best timber-producing land on the Forest. Part of it includes a large mountain top flat near the top of the Blue Ridge, where the drainage is so confused that a large pond, several acres in area, occurs. This moisture condition, together with the altitude of 3,500 feet, enables several northern tree species to flourish far south of their natural range. Similar drainage conditions occur in the lower country to the north where large cranberry beds have been established in the ponds which lie within a few yards of boundary lines of the offered lands.



Merry
Christmas

WEEKLY BULLETIN

Forest Service - Washington Office

(Not for Publication)

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December 20-27, 1920.

"All glory be to God on high,
And to the earth be peace
Good-Will henceforth from
heaven to men
Begin, and never cease."

THERE IS A SANTA CLAUS!

By Thomas Nelson Page

Of course, I believe in Santa Claus, and if anyone should do away with him, or even attempt to do so, I feel that it would be an unpardonable crime, for it would be a crime against childhood. I believe in Santa Claus "because" - because I have always believed in him since I used to wake up of a Christmas morning in the little trundle bed and find that Santa Claus had really been there during the night and filled our stockings with real Christmas presents. And I believe in him because since then I have seen several generations of children - two in my own family - believe in him as others believed in him before them, and when generation after generation of little children, who know the deep things of life, who can with absolute certainty decide questions that puzzle the Magi, and can make a perfectly definite and infallible choice where right and wrong are concerned, believe, who am I not to believe?

I was brought up to believe in Santa Claus as every one in my day was--gray beard, "little round belly," sleigh, reindeer, chimneys and all, and I cling fondly to old beliefs where they mean kindness, sweetness and the joyous spirit of family life, especially where the children grew up among the elders to learn to carry on the traditions and were not farmed out to nurses, and grooms, and helots.

Just when Santa Claus first came I can not exactly tell. I only know that a long time ago, nearly 2,000 years ago, in a country a great way off from here there were shepherds--simple, childlike folk--watching their flocks in the fields by night, and an angel appeared to them, bringing glad tidings of great joy, for he said that that day was born in the City of David, which was Bethlehem, a Savior whom they were looking for, and that they would find the babe wrapped in swaddling clothes lying in a manger. And suddenly there was with the angel a multitude of the heavenly host singing Glory to God in the highest and on earth Peace to men of Good Will.

THERE IS A SANTA CLAUS! (Continued)

And after His holy work began to spread over Christendom and His worship spread likewise, our wise men called this night Christmas, and in time it became the custom to keep it as a great festival of peace and good will, of cheer and joy. And in this Christmas spirit came Santa Claus; the joy of childhood; the golden opportunity of maturer age for dispensing happiness.

Of course, I believe in Santa Claus, and I am sorry for all the practical-minded, prosaic, poor souls who have no light of imagination to help them understand what all children know. They can never know about Santa Claus any more than the deaf know music or the blind know beauty. If they doubt Santa Claus let them try sending Christmas presents to any children they know or to any poor person they know; and they will soon have reason to change their minds.

But, no matter what they say or do, Santa Claus will come every Christmas so long as children believe in him, and if he should ever stop coming it will be a sad Christmas for the world, for it will have lost the happiest season of the year, sacred to children, but in which even the grown-up people can become as little children, and so have for a few hours a bit of heaven on earth within them.

HOW MUCH PUNISHMENT CAN YOU TAKE?

By Fred Morrell

Every field officer knows that a part of a good outdoor man's endurance is founded on his ability "to take punishment." We all like to think of the long trail, or the hard task, side by side with the chap who can "go on his nerve" and keep his temper and his smile. "Battling Nelson" will long be remembered and admired among followers of the fight game as one who won matches as much through his ability to take as to inflict punishment. No one of us would select for a hard piece of work in the field a man who is not able to suffer physical privation and endure hardship without "belly-aching" about it. The best fellow-camper I have ever known was a man whom I never heard complain--one who could find his fun on the rainy day as well as the bright one, and who was as cheerful when the beds were wet and the chuck was low as when all was rosy. He took his punishment with a smile and never "beefed." All of us remember with pride the times when we've done this, and with shame those when the reverse was true.

It is a tradition in the Forest Service that men should face discomfort and fatigue and smile. There are few who can not do it.

There is another kind of punishment that we frequently have to take, of perhaps no less consequence than that discussed above. It is mental punishment in the form of criticism. How about your ability there? When it comes, do you sulk on the trail and curse the weather and abuse your horse, so to speak? Do you see red and strike out wildly and foul your opponent? Do you "quit like a steer in the road" and say "it's no use to try?" Or do you face your critic with a grin and say: "You landed square that time, old chap, but it'll take more punch than you've got left to do it again." I think of another Service man who took this sort of punishment again and again; who never could be knocked down long enough to take the count; who was always harder to reach with merited criticism the next time, and who won his fight, and made good because he kept his temper and his head and his smile. There are lots of others like him in the Forest Service and elsewhere, and there are some who have gone out because they could not do it.

Maybe you haven't had to take much of this sort of punishment, or perhaps it has been given to you sugar-coated. Possibly your critics have had that rare tact that enabled them to give it to you in such form that it didn't hurt. But sooner or later, you will be up against the other kind. In his enthusiasm for his job, he may possibly lose his sense of proportion a little and give you a jolt below the belt. If he does, don't foul him and lose the fight; and don't quit and say, "I can't stand up against this guy because he doesn't fight fair." If you do, the loss will be yours more than his, and after it's all over, you'll be ashamed as you are now of the time when you abused your fellow-camper because in his eagerness to serve, he burned the sinkers.

We have a lot (but never enough) of the kind of men made of the stuff that carries them to the end of the trail without complaint. There are lots of the kind who can take the other form of punishment, too, but it isn't so much a Service tradition and pride. There is room for more of it. We need a lot during these reconstruction days. Let us watch our step.

Boys' Forestry Clubs

A project to encourage the boyhood of the State to reforest Louisiana, put idle lands to work, and incidentally teach the youth the importance of conservation and thrift was the dominant note struck in New Orleans, La., December 6 at the first meeting of the general forestry advisory board, appointed recently by Governor Parker. Methods will be worked out to promote a State-wide movement that it is thought will result in the reforestation of hundreds of thousands of acres, the actual work being performed by boys under the supervision of the superintendent of forestry, R. D. Forbes.

Briefly, the plan is to induce farmers who may have strips of land not well adapted to agriculture, to give such land to their boys, and to enter into a contract with the State, the farmer as trustee for his son, to set aside such strips for a term of years exclusively for the growing of trees. As the boy grows to manhood the trees grow with him, and upon arriving at maturity the boy will find himself in possession of a well-timbered tract of second-growth which will be an asset to his purse and one to the State itself.

The boys will look after the reforesting, the protection of the lot from fire, and from that arch enemy of young forest growth--the hog. It is the opinion of members of the board that the movement can be made as important and far-reaching as the boy scout plan, for thousands of farmers have the land and the sons. At present the lands are lying fallow, but they should have on them a crop of seedling pines. By lowering taxation on such lands to the irreducible minimum the State will encourage the plan and the forestry bureau will instruct the boys.--The Southern Lumberman.

The Call of the Open

Are you dissatisfied with your lot--do you grow tired of the mountains and plains and forests and long for a closer touch of civilization and the "bright lights?" To you is presented as an inspiration this letter of "a man from the West." Read it and ponder, and be glad in your heart for God's open places, the snow capped peaks, the painted deserts, and the fragrance of spruce and pine.--Ed.

"I think you have the right idea with regard to natural life and education. Since I have been in New York it has been impressed upon me that the only hope for this country is to get close to Nature. Instead, we seem to be drifting away from it constantly. The conditions under which children are brought up here are shocking. My youngest boy expressed it when he said the other day: "Why do they talk about bringing children up here, when they bring them down?" I never would have moved here, of course, with any very small children to bring up. But there are millions who have no choice, and nothing adequate is done to relieve the situation. I believe there is no place in the world--in fact, I am confident of it--where so little is done for children as in New York. The indifference of this city is costing the nation too much. Letting all these immigrants settle here instead of getting them out in the country is just simply adding poison to poison.

"There is not much use trying to educate the grown-ups about what the West has to offer. I never speak of it unless some one else brings it up. The only hope is to begin with the kids. But when you keep them shut up in these streets, with the older people nagging at them all the time, it is too much to expect them to get enthusiastic over a Nature that they never see. So they stew around here and become Socialists, and d--ned if I blame them. Last night was Hallowe'en and I saw one poor little cuss out with his mother, carrying a store-made Jack-o'-lantern. At that we are living in a part of town that is supposed to be almost suburban.

"If this New York blight of indifference hurt New York alone it wouldn't be so bad, but the whole country suffers.

The Call of the Open (Continued)

"It looks to me as if the West is getting the worst of it all down the line. They've got the railroad fares now where the average man can't penalize himself sufficiently to take a western trip. It's cheaper and easier to go to Europe, so we let them go. Even the auto tourist sticks around in these rich and populous states that can afford to build the good roads. I was up in the Adirondacks last summer. If we only had those roads in the Rockies, think what it would mean to the country. But these people come back thinking that Nature ain't so wonderful after all.

"This idea of hunting seems to appeal to a small percentage, but a very powerful percentage of the population. Not one man in fifty that a person meets is a hunter, and the number is dwindling all the time. I noticed where James Oliver Curwood, after years of hunting big game all over the West, said he had a change of heart and never would kill another thing. That idea seems to be gaining ground, largely through education. But if interest in wild animal life can help bring people out in the open, if only to photograph the animals or to look at them and study them, the big result will be obtained.

"I hope you keep on with your idea. I didn't realize how much the country needs it till I moved down here."--Courtesy of Mr. Smith Riley.

High Cost of Government?

Persons prone to find fault with the "high cost of government" can obtain considerable enlightenment on this subject by paruuing a chart on government civil expenditures as compared with wholesale costs of various commodities during the past ten years.

These figures show that while the cost of administering the civil government varied a few cents up and down, costs of farm products, food, clothes and clothing, building materials, house furnishings, drugs and chemicals and other commodities advanced more than 100 per cent and in many cases 200 per cent.

In the chart prepared by Bureau of Standards' engineers, it is demonstrated that the United States civil expenditures, which include the salaries of Congress, the President, upkeep of public buildings and all other functions of the civil government, have varied slightly in the past ten years. The year 1913 has been selected as the basic year, or the 100 per cent year. The basic cost of civil government, according to 1913 standards, was $2.20 per capita.

The highest figures in the past 10 years were for 1915, when the cost of administering the civil government amounted to $2.33 per capita. The cost per capita in 1910 was $2.24; 1919, $2.21. The 1920 figures were not available.

Farm products the first of this year, figuring on wholesale prices, were about 148 per cent higher than in 1913; food was about 160 per cent higher; clothes and clothing 250 per cent; fuel and lighting, 110 per cent; metals and metal and metal products, 90 per cent; lumber and building materials, 220 per cent; chemicals and drugs, 105 per cent; house furnishing goods, 240 per cent; miscellaneous goods, 140 per cent, and an average of all commodities used by the Government about 110 per cent higher.

Never Satisfied

Getting out this Bulletin is no picnic.

If we print jokes, folks say we are silly.

If we don't, they say we are too serious.

If we publish original matter, they say we lack variety.

If we publish things from other papers, we are too lazy
to write.

If we attend to routine work, we ought to be rustling news.

If we rustle for news, we are not attending to business in our own office.

Never Satisfied (Continued)

If we don't print the contributions from the field, we don't
show proper appreciation.

If we do print them, the paper is filled with junk.

What is a fellow to do anyway?
--Editor.

P. S. Someone will say "He cribbed that!"

Tree Rings and Climatic Fluctuations

For nearly twenty years Prof. E. A. Douglass has been studying the annual rings of trees, as found in various parts of the world, in quest of information concerning the history of climates. A complete account of his studies and their results is set forth in Publication 289 of the Carnegie Institution of Washington, "Climatic Cycles and Tree-Growth." Prof. Douglass began with investigations on yellow pine in Arizona. By comparison with meteorological records, he established the fact that the thickness of the annual rings seen in cross sections of the trees varied with the yearly rainfall. Having determined this relation for the comparatively brief period for which weather records were available he argued that the relation held good for earlier periods, and that sections of old trees would therefore furnish a record of fluctuations of rainfall for hundreds of years. His plan has been to study a group of trees of various species, appropriately located, for each region embraced in his investigations, and he has worked out some ingenious methods and mechanical devices for making his analyses and determining periodicities, etc. Sections were obtained from many parts of the United States and Europe, and, in the case of the Sequoias of California, the record has been extended back more than 3,000 years. Among the interesting discoveries announced by Prof. Douglass is the fact that practically all the groups of trees investigated show the sunspot cycle or its multiples.--Scientific American.

Cradle Hymn

Away in a manger, no crib for a bed
  The little Lord Jesus laid down his sweet head.
The stars in the bright sky looked down where He lay
  The little Lord Jesus asleep on the hay.

The cattle are lowing, the baby awakes,
  But little Lord Jesus no crying He makes.
I love Thee, Lord Jesus! Look down from the sky,
  And stay by my cradle till morning is nigh.--Martin Luther.

(For the Mothers of the Forest Service who "watch and wait," with the hope that perhaps they too may find something in the Bulletin besides "shop talk."--Ed.)

Sheep as Scenery

By A. H. Carhart

Mr. Guthrie opened up a live subject when he asked the question as to when the great American woolly becomes picturesque. There has been some perturbation on the part of stockmen that grazing is going to suffer if we run tourists on the ranges and here comes the gay tourist with a wail that his scenery is being ruined and chewed up by a band of sheep.

Now the fact is that there is not going to be any real reduction in the number of stock grazed in the National Forests because they are used by the tourists; and on the other hand, there is not going to be any lessening of the recreation value with good grazing management and a little head work.

Colorado has not lessened the number of cattle grazed during the past year in spite of the fact that the recreational use has grown in the last decade from a few hundred thousand annual visitors to the Forests to where at least a million and a quarter came this season just past. Of course any intensively used recreational area like public camps or meeting places should be protected from indiscriminate livestock use. Such areas, in the majority of cases, are liable not to be good grazing land and in toto will represent an infinitesimal portion of the great Forest lands.

The question of getting the recreationist to a point where he will look for the sheep and cattle in the Forest with expectancy and with some pleasure when he does discover them is very close to the point I tried to get over in a previous article: namely, that the recreation business is the one great opportunity of the Forest Service to "sell" the National Forests to the whole Nation through the medium of recreation use. Bring in your recreational visitors to the tune of scenery, fly casting and the pop of a high power if that is necessary, but when they have arrived sell them the whole system of forest activities, sawmills, pulp production, beef, wool, or watershed protection. Obviously, if we can not present these activities in the proper light we can not make this visitor become a booster for the whole scheme of a National forest policy.

In this specific instance, solving the problem of getting the recreationist interested in the sheep and the herder will help to put over the grazing game in the Forest. There are two points where there is surely a chance of getting the vacation visitor interested in the sheep business. I venture to say that the life of the herder in the mountains of the U. S. is as full of romance as is the life of the much touted alpine nurse of the Swiss goats. Tell that story of hardship, narrow escapes, romantic battles with elements or animals, or any other good yarns about sheep herders in general that cast a romantic glamour over the business. There is, of course, a tendency at times, on the part of some of the old-time cowmen, to disparage the sheepman. That is not the question. We do not have to make love to him. Let the tourist do that. But get the tourist to see that these men on the hill tops in the U. S. are as picturesque in every way as those we pay money to look at in the Alps. This may work a hardship on some poor herder if he gets to be a hero for he will probably be getting pink stationery spattered over with mushy sentiment. But it will all tend to make the sheep herder and his flock a thing of romantic interest to the city visitor to the forest, and if that visitor takes this attitude towards the activity he will not go back to the city and pen a letter to the local editor insisting that he is going to start something because his vacation land is getting all masticated by a bunch of sheep. Give the tourist visitor this outlook and the rest will take care of itself. If he does not find sheep there, he will be disappointed.

The same idea applies to cows. There is no more romantic figure in the fiction of our country than the cowboy. He may not like this sort of attention any more than the sheep herder, but if the tourist will go out seeking this figure of the old West in the National Forests, any man on horseback will be a cow puncher and they will photograph him and tell of meeting a real, live cowboy the rest of the trip. So give these visitors the outlook and they will get their money's worth out of the recreation side of the sheep herder and his flock.

There is just one other point here that should be mentioned. That is the fact that any view is more sprightly with any kind of animal life in it. Sheep were kept in the old English manors for just that reason. Game would be the ideal thing for the recreation visitor to see in a forest vista, but steers and lambs can serve the same general purpose. In this way, the presence of stock in the Forest can be an actual value to the recreation use. It remains only to play up the point a little and prepare the visitors to recognize the activity when they come upon it and there will be a recreation return value here that we did not offer the visitor before, because he approaches the whole question of grazing in the Forests with a frame of mind that makes it a thing of interest to be enjoyed by him.

A sheep is picturesque just as soon as we make him so. A whole lot of the question lies with all of us and how we present the grazing activity to the public. And because any life in a scene will tend to make it more interesting the presence of stock is really a recreational asset of no minor size.

Forest Resources of the Philippine Islands

Area: The virgin forests of the Philippine Islands cover approximately 40,000 square miles, or about one-third the total area of the Archipelago. In addition there are estimated to be about 20,000 square miles of second growth forest principally available for firewood and small timber. All told, the virgin forests cover an area about equal to the State of New Mexico.

Ownership: More than 99 per cent of the timber belongs to the Philippine Government and is under the administrative control of the Bureau of Forestry.

Composition: About 70 per cent of all virgin timber belongs to the dipterocarp family which generally occurs in almost pure stands. The larger individuals of this family reach 200 feet in height with a maximum diameter of 7 feet. About a dozen botanically distinct species of this family furnish probably 80 per cent of the entire timber cut of the Philippines, but from the standpoint of the lumbermen this number could be reduced to three groups, lauans, apitongs, and yacals.

Timber Sales: The public forests of the Philippines are not sold, but are developed under a license system. Small operators usually work under ordinary yearly licenses for definite small areas. Exclusive concessions are generally in the form of a twenty-year license to cut and extract timber and other forest products from a specified tract. The land title itself is in no way affected by such a license.

Sawmills: At present there are about 50 sawmills operating in the Islands, about 12 of which compare favorably with the average modern sawmill in the United States. The total cut of these mills is about 100 to 130 million board feet per year.

Markets: The Philippine Islands use approximately 100 million board feet of lumber each year, of which only a small amount is imported. China, Japan, and Australia use yearly more than 200 million board feet of American lumber, a large part of which could be furnished by Philippine companies if they were properly capitalized and equipped. A limited market for Philippine lumber has already been secured in the United States and to a lesser extent in Europe. Many of these timbers are unexcelled for interior finish, cabinet work and other special uses for which imported woods are constantly in demand.

Minor Forest Products: This term includes all products of the forest except timber. The most important minor products are nipa, sugar, and alcohol; rattan, used in making furniture; almaciga, used in making high grade varnish; lumbang, an oil-producing nut; dye-woods and barks, gutta-percha and rubber; soapbarks; fibers suitable for making baskets, hats, ropes, etc., wax and many kinds of medicinal plants.--Philippine Press Bureau.

Huge Sum Needed for Roads and Trails

By G. H. Lautz

According to reports received from the Districts, it will be necessary to construct 24,565 miles of roads at an approximate cost of $112,526,800 to complete the system of roads which is needed during the next ten years for all the National Forests. Of this total 14,710 miles are required primarily for the protection, development and utilization of the Forests, while the remaining 9,855 miles are principally desired for public needs. Of this 24,565 miles there will be required 11,078 miles of new construction to serve regions now without roads. The other 13,487 miles represent needed reconstruction to make existing roads passable or to bring them to a higher standard.

Likewise it is figured that the construction of 22,511 miles of trails at an approximate cost of $6,297,000 will be required to furnish the Forests with a complete communication system.

The total needed is therefore 47,076 miles of construction at a cost of $118,823,800. It is estimated that upon January 1 there will be a balance in the major project fund of $3,179,700. This amount plus the $900,000 which will be made available annually for the next five years from the Section 8 Federal Aid Road Act makes a total of $7,679,700.

Huge Sum Needed for Roads and Trails (Continued)

The Forest Service has sufficient funds in sight to take care of the $4,765,100 required on account of existing agreements and $1,481,000 needed for projects where promises of assistance have been made or projects under construction have not been completed to the required length or standard. If, however, all the projects approved by the Secretary of Agriculture as worthy of cooperation are to be constructed, $3,918,800 additional appropriation will be necessary.

If the entire comprehensive road and trail system as now planned by the Districts is to be constructed it is estimated that an appropriation of $111,144,100, in addition to the present funds, will be required.

This estimate does not include provision for hard surfacing any of the roads.

New Legislation in Congress

Reorganization: The measure of most far-reaching importance on which the House acted during the past week was in passing the Smoot-Reavis resolution for a joint congressional committee on reorganization of the Government establishments. Speaker Gillett named on that committee Representatives Reavis, Nebraska, and Temple, Pennsylvania, Republicans, and Moore, Virginia, Democrat.

Reclassification: Representative Lehlbach, chairman of the committee on reform in the Civil Service, introduced a bill to reclassify civilian positions in the District of Columbia and in the field services, in accordance with the report of the joint congressional commission on reclassification.

More Experiment Stations: Senator Ransdell (Louisiana) has introduced a bill for a forest experiment station, the location of which is to be selected by the Secretary of Agriculture. An appropriation of $50,000 is asked.

Senator Phipps (Colorado) has introduced a bill, similar to that of Representative Timberlake's in the House, for a Colorado experiment station.

General Forestry Program: Representative Snell of New York introduced a bill (H. R. 15327) on December 22, putting into legislative form the recommendations for Federal legislation in the Capper Report. This bill is substantially the same as the draft prepared at the meeting of representatives of various interested associations in New York on October 15, and is commonly known as the "Coalition Bill."

Land Exchange: The Land Exchange Bill for the Montezuma National Forest, Colorado, came before the House last week. Immediate consideration of the measure, however, was objected to by Representative Cannon ("Uncle Joe") of Illinois, and the bill went to the foot of the calendar.

Canadian Paper and Pulp Association Conference

By C. W. Boyce

To one accustomed to the American way of disregarding timber and its future supply, the meeting of the Canadian Paper and Pulp Association (Woodlands Section) held at Toronto, Ontario, in December, was a revelation. Forestry was talked--talked by timbermen, pulp men, and exploiters in general. Furthermore, the talk was backed by experiments which various companies are carrying on to find out the best methods of cutting to secure maximum pulpwood production with minimum waste; cutting to insure natural reproduction; experiments relative to clear cutting and planting; and the adaptation of aerial appliances to forestry. It was a gratifying experience to hear lumbermen talk of selection systems, annual growth, suppression, etc.

The meeting was characterized first by its interest in things relating to forestry, and secondly, by the receptive attitude with which reports of a technical forestry nature were received by business men. There was plenty of enthusiasm throughout, discussions were to the point and businesslike. The majority of those present were operators, and they were eager for information that would be of benefit to them in establishing permanent forested areas. They were interested to the extent that they took notes.

Canadian Paper and Pulp Association Conference (Continued)

Ellwood Wilson, Forester for the Laurentide Paper Company, gave a report of the Imperial Forest Conference. Dr. Howe, of the University of Toronto, spoke on "Performance of a Few Culled Acres," setting forth the results of successive cuttings made during the past fifty years on a given stand. R. O. Sweezy spoke on the various methods of securing reproduction with special reference to costs. This paper was followed by a discussion during which various operators told their experiences, carried on on a big scale, to secure adequate reproduction on cut-over lands. H. Graeslund, of Sweden, gave an interesting talk on the "Swedish Forest Policy," comparing conditions and methods in that country with those met with in Canada.

The second day of the conference was given over to a discussion of aerial appliances as adapted to forestry. Colonel Leckie, Director of the Air Board of Canada, showed what the Dominion was doing and hoped to do during the next year. Mr. Wilson described the airplane work done by the Laurentide Company, which has experimented with aerial photography further than any other company in Canada, and has secured excellent results. This company mapped some 3,000 miles by aerial means during the past summer, securing excellent pictures, which they are using in building up areas adjacent to their mills for planting. The cost of this work, including all experiments and overhead, was $18 per square mile, and it is expected to cut this figure by 50 per cent during the coming season. A description of the air patrol work in Oregon and the results of recent experiments in aerial mapping in the United States were given by the writer. A number of Canadian companies are planning to use airplanes for mapping and transportation purposes this coming summer, using flying boats, and the countless lakes of the country as landing fields. The airplane offers a quick means of reconnoitering unmapped countries, and may also be used to carry supplies into the backwoods for winter use at a considerable reduction over present method costs.

Odds and Ends

One of the ethics of the newspaper game is to unfailingly give a man's full name, including initials and important titles, if he has any, in first referring to him in an article. This is yet something for us all to learn, if the stories I have thus far seen for the "Weekly Bulletin" are any criterion. Now that we have a Service Directory, I see no valid reason for not adopting such a practice. May I request that we have less "Mr's" and more initials in copy submitted for publication.--Editor.

Better Days Ahead

By H. I. Snyder

To one who desires to keep in touch with current events and considers, for the present, only the financial aspect of the situation, the future for the Forest Service employees is more encouraging. Men and women who are receiving and expect to continue receiving remuneration from the Forest Service for expenditure of their energies with a feeling of a possible personal financial catastrophe, should take into consideration the present economic condition of our nation and pyschological attitude of the people.

There is a natural law effecting great changes for the betterment of economic conditions in the world through a draining of pocketbooks to the point where owners of said pocketbooks begin to appeal for a change of conditions, and American people seem to be no exception to that law.

One of those appeals now growing and one which promises to do the most good for our forest conditions is coming from newspapers and magazines who are experiencing difficulty in obtaining their paper supply and are paying exorbitant prices for what paper they get. They are beginning to realize the only way to solve the problem is to conserve and grow more forests, which consequently means to accomplish that we must institute a progressive national forest policy with substantial federal and State cooperative support for carrying such a policy into successful operation.

Better Days Ahead (Continued)

News columns and editorials of periodicals, magazines, and newspapers, the one great medium by which public enlightenment of national conditions is obtained, serve also as a large medium for congressmen to keep informed of growing public sentiment. Once public sentiment shows a demand for better forest conditions, the matter of obtaining favorable legislation in that line will be greatly simplified. Consequently, the present growing appeal of those organs, coupled with expressions and influence of organizations, such as the American Forestry Association, and of writers who are naturally progressive in promoting legislation for our permanent national prosperity, will prove beneficial in future congressional action and State legislation.

Under economic pressure, private cooperation toward establishing a national forest policy is also coming to the front from lumber interests and other wood utilization organizations as they see their future activities rapidly disappearing with diminishing forest resources, and the great problem of coordinating federal, State and private interests in instituting a national forest program promises to be solved largely by our present Forester who seems to be the "man of the hour" in successfully bringing together varied interests on a satisfactory basis.

We are also passing through a stage in which people are more open-minded and willing to listen to and support sensible plans for our national good, and once the great American people understand that a certain national policy is vitally necessary, they will gladly support it.

To say that Forest Service employees will ultimately be financially benefited by such a state of affairs seems to be at least a fair suggestion and an optimistic view of the situation.

Washington Notes

Forester's Report: The Report of the Forester for the fiscal year ending June 30, 1920, was released December 19. Col. Greeley says in part: "In spite of the fact that a depleted and overburdened personnel made it necessary for the Forest Service to refuse at some places to take on new business, receipts from National Forests in the fiscal year 1920 exceeded those of 1919 by $435,067.42 and set a new high mark of $4,793,482.****A demand is growing on the part of wood-using industries and the public at large for a national policy of forestry which will insure adequate future supplies of timber and other forest products."

Illustrated Talk to Students: Assistant Forester Herbert A. Smith gave an illustrated talk on "Forest Trails at the Roosevelt Military Academy at West Englewood, New Jersey, on December 16. The President of the Academy is much interested in having the boys in the school become acquainted with forestry in its various aspects. Woodcraft is taught the boys by "Bill" Sewall, formerly guide to President Roosevelt. Supplementary to this, the school is endeavoring to have the work of the Forest Service and the general forestry situation presented to the boys through occasional lectures.

Palestine Needs Timber: Development and culture of the timberlands of Palestine was declared a national need of that country by Mr. Raphael Zon, who spoke before a meeting of the Zionist Society of Engineers and Agriculturists at the Y. M. H. A. building on December 19. Fires and thin soil, and indiscriminate grazing of sheep and goats were declared the causes for elimination of whatever forests had been in the country originally. Measures for scientific relief were suggested in the address.

Engineering Exhibit: An interesting exhibition of some of the tangible results of the work done in the Branch of Engineering is being held in Rooms 406, 408 and 409. While a great many have already visited the exhibition it is planned to continue it during the holidays in order that all may have an opportunity of seeing the many interesting features.

Among the exhibits are botanical and dendrological line-drawings in pen and ink, both free-hand and bromide work, to be used in illustrating articles for publication. There has also been prepared illustrations in water-color and oil for the purpose of showing how the grazing areas of the National Forests are improved and perpetuated. Photography has contributed a particularly fine display of prints in sepia. A large number of western views were taken last summer, some of which are on exhibition, together with enlargements of a few of the best pictures. What can be done in the line of color-photography is also shown by a number of autochromes.

There are all sorts and sizes of maps--from the base map drawn in pencil to the finished map from the engraver. This feature of the exhibition is very interesting and instructive, a notable piece of work being the first working plan prepared by the Service in its earliest days, together with photographs of the crew and camp. Also the office of Atlas illustrates in an excellent manner the work which it is doing for the Forest Service.

Altogether Engineering feels quite pleased at being able to show what it can do when called upon.--T. W. Norcross.

District 2 - Rocky Mountain District

What--Again?: Miss Helen Dowe, Fire Lookout on the Devil's Head, Pike National Forest, still continues to gain fame and glory through publicity, her latest appearance being in "Farm and Fireside" for December.

A Fruitful Example: A new outfit, T. G. Graham & Company, recently settled in this country and secured a preference on the Florida Division through purchase. The Company runs about 500 head of cattle. Their range is badly infested with larkspur and some loss each year has occurred. This allotment adjoins the Carbonate Division, where our larkspur eradication operations were conducted so successfully five years ago. Soon after the cattle were moved onto the range in June, this outfit lost four head of cattle through larkspur poisoning. Mr. T. C. Graham immediately consulted this office, when he was cited to the work which was done on the Forest adjoining his range and the beneficial results which had been secured. He requested cooperation from the Forest Service, but on account of the lack of funds the only thing we were able to do was to provide him with necessary tools for the work and instructions for conducting the operation. He secured 15 Navajo Indians from the Reservation and cleared about 300 acres of the worst poison patches at a cost to himself of approximately $1,000. The results proved to be highly satisfactory to Mr. Graham and he suffered no further losses throughout the season from this cause. He has expressed himself to the effect that the money has been well spent and will prove to be a good investment. He intends to follow this work up each year until his range is free from the obnoxious larkspur. This office intends to capitalize Mr. Graham's experience in an effort to induce other stockmen to adopt similar methods on their ranges.--H.Earl French, Durango-San Juan.

Rangers' Business Meeting: A Rangers' business meeting was held at the Supervisor's office of the Pike National Forest December 7 to 10, during which a revision of plans of work and allotment estimates for 1921-22 were taken up in detail in a manner similar to the regular Supervisor allotment conferences. The closing day was devoted to a discussion of general policies, and talks by Messrs. Peck, Granger, Hatton, Thompson, and Wheeler were very helpful in clearing up any doubtful points regarding policy and procedure.

The importance of a practicable plan of work was the feature of the meeting, and the interest evidenced by the field officers was much greater than in any previous year.

Michigan Planting: During the fall planting operations on the Michigan Forest, 590 acres were planted to Norway pine, using 2-0 seedling stock. The cost per acre of this planting was $5.19, representing a cash outlay, exclusive of cost of trees and the prorated charge of equipment used, of $2.99 per acre. Swamping in advance of the teams furrowing was necessary this year for the first time in the straightening of down timber and added 21 cents per acre to the cost of the work. The number of trees per acre was also increased to 965 rather than the standard figure of 700 because of the excess stock available at the Beal Nursery, adding both to the cost of trees and the labor of planting. The planters averaged 2,208 trees per day per man over a period of more than a month.

District 4 - Intermountain District

No Joke: "You may think we are joking when we say that no man can ever become a success until he gets fired; but we are not joking, and it's a cold, hard fact. All men who take any important line of work get fired. The man who makes good gets fired by enthusiasm, while the one who makes a failure gets fired by the boss. Take your choice."

Vaccinate for Blackleg: Mr. C. N. Woods attended a meeting of the Utah State Livestock Board yesterday at Salt Lake City to take up the question of compelling cattlemen using ranges on the National Forests to vaccinate for blackleg or lose their grazing preference. The State Livestock Board agreed with the stand of the Forest Service in the matter.

Fine Photographs: Mr. E. S. Shipp, Forest Service photographer, Washington, made a trip in D-4 last summer touching numerous Forests in Utah, Idaho, and Wyoming. The photographic results of his trip have just reached us in the form of two sets of pictures, many of them wonderfully beautiful and all of them representing the best pictures yet secured in District 4. One set of these prints has been sorted by Forests and the pictures of each Forest are being forwarded to the Supervisors.

Society Meeting: A very interesting meeting of the Intermountain Section of the Society of American Foresters was held December 14. About 20 of the fellows were present. Dr. Sampson gave some valuable data on the relation his work bears to the handling of stock in pastures and on the range. Deputy Supervisor Mink gave a very interesting talk on the Humboldt Forest bringing out in particular the management of stock on the range and the progress which has been made in grazing work on the Humboldt during the past four years. He also touched upon the relation which grazing has upon the reproduction of aspen and the remarkable results which are following the closing of certain areas to grazing. On these closed areas (one of 20,000 acres) the aspen is coming back in an astonishing degree.

"Overland" Costs: For the information of any Forest officer contemplating the purchase of an "Overland Four" touring car, the following figures on the cost of operation are submitted. These figures are derived from an absolutely accurate record kept for a new car purchased by the Supervisor May 4, 1920, at a cost of $1,095, and run 3,000 miles, 2,096 of which covered official travel:

Operating Costs:

Gas, 153 gal. at an average price of $.442 per gal.	$67.63	
Oil, 6 gal. at an average price of $1.87½ per gal.	11.25	
Total operating costs		$78.88

Maintenance Costs:

Three new tires	$98.45	
Four new tubes	15.75	
Repairs	49.45	
Total maintenance costs		$163.65
Cost per mile	.081	

And, if you wish:

Interest - $1,095 for 8 months at 8%, spread over 3,000 miles, per mile .019

Also:

Depreciation - Placing life of car at five years and wreckage value at $150, gives an annual depreciation of $189--spread over 3,000 miles, per mile .063

Total cost per mile $0.163

It is only fair to state that most of the repairs and a large part of the heavy tire expense is due to driving over rough, rocky roads at night, hauling fire-fighters and equipment.

In purchasing a new car of this type, it would be a measure of economy to pay the difference and have the car equipped with the best cord tires obtainable. The fabric tires furnished with these cars are practically worthless for use on rough, rocky roads such as we have on the Salmon.

It will be observed that 19.6 miles per gallon of gas and 500 miles per gallon of oil were obtained. Up to September 1, when the roads became more or less muddy and heavy, a little over 21 miles per gallon of gas was obtained.
--Salmon News Letter.

Hunter Saves Deer: While we have had no reason to doubt the truthfulness of some stories circulated in District 4, we were not convinced until deer season the past fall that eagles prey on young deer. This is how it happened:

An old time hunter, who has been in our Deputy Supervisor's party for the past three years, was skillfully creeping through the rough and precipitous East Fork country on Ranger District 4, when his attention was directed to the caprices of an American eagle "in the air, on the ground and everywhere." His skill had long since taught him that to shoot would spoil the day's hunt, where echoes travel like wireless messages to the sharp hearing animals. But he was now upon a last spring's fawn crouched beneath a willow patch seeking protection from its dreaded enemy the "American Eagle." The eagle first took fright at the hunter and boldly circled the deer's only refuge when the hunter became peeved and aimed his dead best at the cruel bird and the rest can be guessed. Poor deer made its escape to its mother herd, because the law reads "Unlawful to kill fawns."--Humboldt Hummer.

Work in Alaska Difficult: We recently received a letter from former Grazing Examiner Palmer, who is now with the Biological Survey in Alaska. He states that Johnson and himself have been continually on the jump since hitting Alaska. The work has proved to be very interesting and the problems many and varied. The weather there is around zero and steadily going down. All travel must now be made by dog team. One of the particular difficulties, he remarks, is becoming acquainted with the individual dogs and their names, such as Mukchouk, Meluk, Igucuk, Tagktuk, and Choukowsky. He enclosed a number of very interesting snaps of the Eskimos, a reindeer herd, a view of his headquarters and views of the Alaska tundra.

Scenic Attractions Advertised: Dr. Broaddus of Salt Lake City gave a lecture last night illustrating his talk with colored slides of Bryce, Zion Canyon, Cedar Canyon and Cedar Breaks. He has some wonderful views of scenic attractions of southern Utah. Accompanying Mr. Broaddus are Mayor C. C. Neslen of Salt Lake and Mr. Rayburn, Secretary of the Salt Lake Commercial Club, who are here to represent the Club in drawing up some sort of a working plan whereby the Salt Lake organization will assist the Cedar City Commercial Club in placing our great scenic attractions on the tourist maps. The questions which these gentlemen have come to discuss are exceedingly interesting to us in connection with the recreational development of the Forest as the whole plan centers on Cedar Breaks and the Sevier Forest, and the establishment of first class camps to care for the tourists. Undoubtedly the Sevier Rangers will not want for company during the coming summer and it may keep them nightly busy training tenderfeet to put out their fires and how to obtain the best views of the Breaks without falling over the rim.--Dixie Doings.

Good Method of Education: Inspector Favre is running a series of articles in the local newspapers of Nevada on the subject of deferred and rotation grazing and other grazing topics. This is a very effective means of educating the public on such matters.

White Coal: Since the Supervisors have been authorized to destroy old files we have been supplementing our $16 a ton coal with paper - and needless to say it helps - and the supply is not yet exhausted. However, we are living in hopes of getting it consumed before spring. --Nevada Nugget.

Game Violator Caught: November 30, at about the noon hour, a rancher living on Salmon River about four miles from Challis, telephoned the information to the office that some one was shooting mountain sheep on what is known as the Jenson Cliffs, and if we wanted to get him to come down at once. Supervisor Laing and Ranger Frost immediately saddled up their horses and rode with all haste to that vicinity. They were unable to find anyone at the time but finally picked up a footman's tracks leading out of that section. These were followed until they led to where a horse had been tied for some time. The footman had apparently mounted the horse and rode off. The horse tracks were followed to an Italian's ranch at the mouth of Birch Creek. There was nothing to indicate that the rancher had killed or taken anything with him, as he had walked directly to his horse, mounted and rode away. After seeing where the horseman had gone they returned to the place where the sheep were supposed to have been killed and after a diligent search managed to find one dead one in the cliffs, but it was getting so late and was so dangerous getting into where it was, it was decided to leave it until the next day. Next morning Laing and Ranger Shaw returned to the place and accompanied by a couple of ranchers who lived near, went after the sheep that had been located the night before. While getting this one out they discovered another one that had been killed. They had both been dressed and left, the party who had killed them evidently having become frightened and left without making any very strong effort to get them out. They were finally gotten out from the cliffs to the wagon road and brought to Challis. That afternoon, armed with a search warrant and accompanied by the sheriff, Shaw and Laing drove to the Italian rancher's house and made a fairly close search of the place. The only evidence found was a jacket with some blood upon it and a pair of shoes with some spots of blood on them. These the rancher explained as having been caused from a rabbit which he had killed the day before. He did not deny that the horse tracks followed were his, but declared that they had been made two days previous. A careful examination of the inside of the jacket revealed several sheep hairs which he had evidently overlooked in cleaning it out. As no warrant of arrest had been sworn out the party returned to Challis and intended to lay the matter before the prosecuting attorney before making any arrest. That evening the Italian came to town and confessed to the killing. The next morning he was fined $100 by the Probate Judge, who also ordered the sale of the sheep meat, hides and heads. These were auctioned off by the sheriff and netted $24.00, $15.50 being turned over to the Game Department and the other $8.50 paid to the two ranchers for helping get the sheep out and to the butcher for skinning and cutting them up. The case caused considerable comment in this section and will no doubt be a great benefit in deterring others from committing the same offense.--Challis Chinook.

Even So!: "There once was a man who found a fat white grub eating his cucumber vines; he did not swear at it, but took it out to sea and caught a shad with it that supplied food for himself and family of nine children for a whole day. That is initiative."

District Forester Redington addressed on December 11 the annual meeting of the California Cattlemen's Association. The attendance was large. President Bixby concisely and forcefully stated the problems before the Association. President Barrows of the University of California made an urgent plea for a thorough economic study of the stock business of the State, and President Sproule of the Southern Pacific R. R. made a masterly address on the relation between employer and employee. The keynote of the whole meeting was accomplishment through cooperative effort.

Some Pet!: A pet deer (buck) claimed by Mr. T. J. Fleming, who has a ranch near Keen Camp wandered away from the mountains early in November. He attacked a Mrs. Reeves on a ranch just below the San Jacinto Ranger Station while Mrs. Reeves was hanging clothes on a line, the deer approaching from behind. While struggling with the deer, Mrs. Reeves' hands were badly lacerated by one of the horns that had been previously broken off. It is reported that Mrs. Reeves suffered serious injuries.

District 4 - Intermountain District (Continued)

After wandering around other ranches for several days, the deer, which was about twenty months old, disappeared, and it is understood that it was killed.--Cleveland Bulletin.

Never Satisfied: Ranger Freer reports that Chas. Laidshaw, who is a trapper in the Jawbone country, killed five lions in one day and one more lion later the same week!! and has gone back for more.--Stanislaus.

Flag Raising: Supervisor Smith says: "Mr. Helms should not have paid so much attention to the fair damsels that sported on the lawn at Meyers Station during the past season. Had he cast his glance once in the direction of the Lake Valley Ranger Station either in the morning or evening he would have seen 'OLD GLORY' rise or descend, for this is a detail carefully looked after by Ranger Bryan and in all my visits to this station I have never yet seen him fail to raise or lower his flag morning or evening." Helms! Is it possible that you were investigating Dam--sels as well as Dam--sites?

District 5 - California District

Law Enforcement: There follows a summary of the law enforcement work for the past year. While some cases are still pending, the report is clear in indicating that we have bettered our good record of 1919 and an outstanding feature of accomplishment (which does not appear in the statistics) is the fact that the cases were not largely bunched on any one forest (as was the case last year.) This means that the entire field has awakened to the need of stricter law enforcement.--P.G.R.

The total number of Law Enforcement cases handled to date in 1920 is 258, divided as follows:

Fire cases tried in State courts, resulting in 148 convictions and 38 acquittals or dropped for various reasons.

The total amount of fines collected is $5,315.

There were 15 cases settled by administrative action, and the amounts paid in settlement of costs and damages reached $1,130.69.

Besides these cases there are 22 cases pending either in the United States Courts or in the office of the Assistant to the Solicitor, involving demands made to the amount of $9,337.95.

The total number of Fish and Game cases handled exclusively by Forest Officers amounts to 35. They were all convictions, and the fines received totalled $1,545.00.

In summarizing the season's activities, it may be seen that the total amount of money collected in both fines and administrative settlements is $7,990.69.

Timber Sale Approved: The agreement covering the sale of one hundred forty-seven million feet of timber to the Standard Lumber Company on the Stanislaus National Forest was approved by Acting District Forester Barrett on November 26. It is anticipated that cutting will start about August 1, 1921, and that the Company will cut about twenty-five million feet during 1921. The total amount of timber is to be cut and removed not later than December 31, 1924.

Paper from Rice Straw: Since the world's paper supply is ever decreasing and the rice supply is ever increasing, it has been decided to make paper from rice straw. A combine of Dutch paper manufacturers is planning a factory in the Dutch East Indies for the manufacture of paper.--Journal of Electricity.

Chas. G. Poole for many years a Forest Supervisor in Wyoming has come to California as State Inspector for the U. S. Biological Survey. This Bureau in its predatory animal work intends to enlarge its organization in California and is entitled to the hearty cooperation of the Forest Service. The record which this Bureau has in the extermination of predatory animals is a very creditable one and because of our large interest in the welfare of the stock industry and the perpetuation of the game supply makes it doubly advisable that we do all we can to continue assisting the Biological Survey.--P.G.R.

District 6 - North Pacific District

How Dry I Am!: Alaska may have gone dry, speaking alcoholically, but so far as Cordova, the headquarters town of the Chugach, is concerned, it is still moist meteorologically.

For the 12-month period ended November 30, the weather observer at Cordova reports a total precipitation of 138.35 inches. The greatest precipitation recorded for one day during the period was 4.45 inches. The driest month of the year was May, with 1.07 inches of rain, while the wettest was October, with 24.67 inches.

There were 170 days during the period recorded as cloudy, 74 partly cloudy, 122 clear, and 208 on which precipitation exceeding .01 inches was recorded. In other words, it rained on an average oftener than every other day.

The lowest temperature recorded was -4 degrees and the highest 71 degrees. The greatest range of temperature in one day was 33 degrees. The mean temperature for the year was 39.05 degrees.

This is a fair sample of climatic conditions prevailing over the eastern two-thirds of the Chugach. In this region forest fires are unheard of. It has been suggested by one ranger that fire signs be furnished for use in this part of the Forest offering a reward for anyone who can start a fire in the woods.

The western end of the Forest, along Turnagain Arm and Cook Inlet, being further inland and less subject to ocean influences, has entirely different conditions. There the precipitation seldom exceeds 20 inches distributed over about eight months of the year.

From May to August this region is subject to fire conditions which are often very severe. In 1920, which was a particularly favorable season, 12 fires were reported. This is a much smaller number than the average for the past eight years. This district contains in the neighborhood of one and a half million acres, and except for the Government railroad which traverses it, is practically devoid of trails or roads.--L. C. Pratt.

You Can Never Tell: On July 21, 1919, the Portland office sent out a press bulletin on the National Forests and city water supplies, which was used by many newspapers of the District. And now along comes the Bend Bulletin of November 16, 1920, and uses this same press bulletin as an editorial! Which shows for one thing that efforts to educate the public may be a long time in showing results, but as a general proposition the efforts are usually worth while, and though you may not see the effect some Forest Officer in later years may benefit by the seed you sowed.

Stories of Early Days: Bert Fine, sometime Forest Ranger in Oregon, is now a barber in John Day. "Yes, sir," said he, poising his razor at a reminiscent angle, "A. S. Ireland sent me into the Beaver Creek country on what is now the Ochoco, the first year she was organized. The cattlemen showed me a dead line on their side of which sheep did not keep their good health very long, and the sheepmen enquired casual-like what would happen if I turned up missing some day."

"It made me an ounce or two nervous," continued Bert, mowing my jawbone savagely. "So I just got them birds together and says I 'Now, boys, if you are looking for a fight there is a company of soldiers down on the Coast that Uncle Sam hires for that particular purpose and I reckon they will accommodate all comers; but as far as I am concerned, I want it understood that I am in the Civil Service and not in the War Department!"--R.L.C.

Mount Hood Folder: The most elaborate recreation folder yet attempted in this District was prepared by Forest Examiner W. J. Paethe last winter on the Mt. Hood region. Copies of this have recently been received from the Government Printing Office, and are quite the best job of printing yet seen in the way of Government recreation material. The booklet contains 32 pages, is profusely illustrated with very attractive cuts from photos loaned to Mr. Paethe by photographers of Portland, is printed on extra quality paper, and altogether is a most creditable piece of work. Mr. Paethe is to be complimented on the very careful and excellent work he did on this folder, as well as collaborators Weidman and Kraebel, who prepared the section of 'Forest Trees of the Mt.Hood Region', as well as the accompanying key. An edition of some 50,000 copies was printed of this folder, and already the public is eagerly asking for copies. The Oregon should be proud to have such an attractive advertising medium.

District 6 - North Pacific District (Continued)

Eagle Creek Camp Ground: 31,418 visitors registered at the Eagle Creek Camp grounds during the season 1920.

Last season 32,583 visitors registered. On account of the gasoline shortage on the Pacific Coast during June, July, and August and owing to a short summer season, the number of visitors that registered this season was not quite as large as that of last year. During this season at various times a check was made of the number of visitors that took time to register and it was found that only one out of five registered. Most of the visitors come from Portland and have registered either last season or during the early part of this season. As many of the visitors come several times during the year they seldom register but once. We therefore can safely estimate that 150,000 visitors were on the camp grounds during this season.

Splendid cooperation was given by the public during the past season, as only two arrests were necessary, these for leaving camp fires burning after the parties had left for home. Almost every camper left their camp site in a clean condition for the use of the next camper. No arrests were necessary for disorderly conduct nor were any campers' automobiles molested, or tables, stoves, public buildings, or other government property damaged in any way.
--A. W.

Um-m-m!: Ranger and Mrs. Strand have gone to the mat with old H. C. Living by calling in the aid of old Mother Nature. During the early fall Mrs. Strand put up a quantity of wild strawberries, blueberries, etc. Early in November "Slim" took a week's annual leave and went out among the ducks and geese, with the result that Mrs. Strand now has on her shelves, in addition to the canned berries, preserves, jellies, etc., 40 or 50 quarts of canned duck and goose. And it's great stuff, believe you me!--L.C.P.

College Plants Trees: In an effort to beautify their college grounds, the students at Lacey have planted young white pine trees on part of the surrounding cut-over land. So far as the Olympic office knows this is the first time that any private owners in this part of Washington have taken steps to reforest their waste lands. The trees used are young pines from the Wind River Nursery near Cascade Locks.

The Fathers at St. Martin's College first attempted transplanting forest trees several years ago when they brought in some well grown young fir from the woods. The trees were, however, so large, and the roots that could be dug out were so small in proportion that the trees all died. They next tried smaller trees--three to four feet tall--with but partial success and finally brought in the fir cones to grow the trees themselves from the seed.

They were also able to obtain the shipment of 2,000 two-year-old western white pines which had been carefully grown in the forest nursery. Tuesday afternoon the boys of the college got together in a tree planting bee which established the young trees among the unsightly stumps of the old logged off land just north of the college. Supervisor Fromme assigned Forest Examiner Griffin to answer the call for help in starting the plantation off right.--A. A. G.

Water Development Pays: A sheep permittee who developed a shallow well in the dry country near Burns on the Ochoco and who has watered a band of sheep from this one place, recently sold 2475 head of "half-breed" lambs at a figure of \$9.50 per cwt., and these lambs weighed out an average of 68½ pounds each. This is conclusive proof that while the range in question may not be 100 per cent desirable for ewes with lambs, it is of sufficient quality to enable the sheepman to operate at a profit. The expense of pumping water for the sheep was very small; exact figures could be furnished to any one interested.

District 7 - Eastern District

Popular Camp Ground: "Say, boys and friends, don't worry about the Chief's (G. W. Edwards, Chief Engineer, Brown Co., Berlin, N. H.) meals this winter, for the rabbits have served an injunction on the Copp Spring Camp Ground (White Mountain National Forest). So it will be open to the public all winter. Therefore, we expect to have many a pleasant meal at this well-known place on the Glen Road. Come now, ye that haven't had the extreme pleasure of taking your car with a load of friends, also your ham and eggs, sweet corn, hot dogs, etc., this season. Go out to the Camp Grounds next season, get acquainted with the outdoor life, spread broadcast your social life and you will be repaid a hundredfold. Say, boys and girls, are you aware that there were about 1,000 people that registered, from all walks of life, at the Camp Grounds this year, and I presume as many that didn't register. Laborers, merchants, doctors, and men and women of prominence, from the far west to the far east, all have heard of our beautiful mountain trips. The beautiful Camp Grounds, the not less beautiful spring water, that is so refreshing to the passer-by.*******

"Well, what does it mean? I should say it means a world of social life among the mountains. Now, neighbors, get your kit ready for the 1921 season, for there will be twice as many next year as there were this year, and if you lag behind you will miss pleasure untold."--The Brown Bulletin.
(Even the memory of a vacation on the National Forests is a tonic.--Ed.)

High Stumpage Prices: Even though lumber conditions are generally dull throughout the southern Appalachian region, Supervisor Spahr on the Cherokee has just consummated a sale aggregating about 325,000 feet of timber. It is interesting to note that for poplar he is receiving $14.00 per M, for white pine $8.75 per M., for yellow pine $6.25 per M., and for the oaks $7.50 per M. While this sale is not for a large amount of timber, still it is interesting to know that the small local operators have enough confidence in the future to purchase present date stumpage at very good prices.

Pity a Lone Elk!: Apropos of the recent discussion concerning the value and desirability of elks' teeth--we do not know whether said teeth are desired, or whether it is an "honest to goodness" wail from the farmers in the vicinity of the Massanutten division of the Shenandoah Forest that has caused the Board of Supervisors of Page County to declare an open season on the one head of elk which has strayed from his native habitat into the Shenandoah Division.

Of course the range is small for this class of game, but it appears that every time this elk gets hungry and eats a choice stalk of corn or a juicy head of cabbage the whole district goes up in arms and demands death of all elk.

At any rate, we have one "benevolent and protective" citizen on the Massanutten in the person of one Lee Long, who has been feeding said elk without protest on his farm for some time, and who, when he heard that an open season was declared on him, had become so fond of him that he drove him into his barn and appealed to the Forest Service to help him save the poor fellow's neck. It appears that the only way this can be done is to ship him to the Shenandoah division of the Forest where he will be protected, for although the Governor of Virginia last year declared an open season on elk, the Board of Supervisors of Augusta County announced that there would be no open season on them in that county and that violators of this regulation would be duly punished.

Since one enterprising stock dealer has agreed to transport our elk for the small sum of $50.00, the finances of the Shenandoah are being scanned closely to find such an amount, the powers that be having failed to provide for any such emergency when making appropriations. Does any other kindly disposed Forest in D-7 have a small amount which it could contribute to a worthy cause?